California Regional Water Quality Control Board

San Francisco Bay Region

1515 Clay Street, Suite 1400
(510) 622-2300• Fax (510)622-2460
http://www.waterboards.ca.gov/sanfrancsicobay

Linda S. Adams
Secretary of Environmental Protection

Arnold Schwarzenegger
Governor

ORDER NO. R2-2007- 0032
NPDES PERMIT NO. CA0005240

WASTE DISCHARGE REQUIREMENTS FOR THE C&H SUGAR COMPANY, INC. AND CROCKETT COMMUNITY SERVICES DISTRICT DISCHARGING TO CARQUINEZ STRAIT THROUGH DISCHARGE POINTS 001 AND 002

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order.

Table 1. Discharger Information

Discharger	C&H Sugar Company, Inc. and Crockett Community Services District (CSD)
Name of Facility	C&H Sugar Refinery, Joint C&H-CSD Philip F. Meads Water Treatment Plant, and CSD's collection system
Facility Address	830 Loring Avenue
	Crockett, California 94525
	Contra Costa County

The Discharger is authorized to discharge from the following discharge points as set forth below.

Table 2. Discharge Locations

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Approximately 22.5 million gallons per day (MGD) of once-through barometric condenser cooling waters, condensed vapors from vacuum pans, once-through cooling water from evaporators and a steam turbine, and roof drains.	38º 03' 27″	122º 13' 06″	Carquinez Strait
002	Approximately 0.93 MGD of secondary treated effluent (process wastewater from the Refinery plus pretreated wastewater from CSD)	38º 03' 30"	122º 13' 28″	Carquinez Strait
003	Storm water: estimated flow rate is less than 1,000 gallons per day (GPD).	38°03'27''	122°13′03″	Carquinez Strait
005	Storm water: estimated flow is 15,000 GPD.	38°03'27''	122°13′11″	Carquinez Strait
006	Storm water: estimated flow is 1,000 GPD.	38°03'27''	122°13′31″	Carquinez Strait
007	Storm water: estimated flow is less than 100 GPD.	38°03'27''	122°13′18″	Carquinez Strait

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
008	Storm water: estimated flow is 3,000 GPD.	38°03'27''	122°13′11″	Carquinez Strait
009	Storm water: estimated flow is less than 100 GPD.	38°03'26''	122°12′46″	Carquinez Strait
011	Storm water: estimated flow is 15,000 GPD.	38°03'27''	122°13′11″	Carquinez Strait
012	Storm water: estimated flow is less than 500 GPD.	38°03'27''	122°13′11″	Carquinez Strait
013	Storm water: estimated flow is 4,500 GPD.	38°03'27''	122°13′15″	Carquinez Strait
014	Storm water: estimated flow is 15,000 GPD.	38°03'22''	122°13′15″	Carquinez Strait
016	Storm water: estimated flow is 25,000 GPD.	38°03'19''	122°13′36″	Carquinez Strait

Table 3. Administrative Information

This Order was adopted by the Regional Water Board on:	April 11, 2007
This Order shall become effective on:	June 1, 2007
This Order shall expire on:	May 31, 2012
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Board have classified this discharge as a major discharge.	
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of the Order expiration date as application for issuance of new waste discharge requirements.	

IT IS HEREBY ORDERED, that Order No. 00-025 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted therein, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted therein, the Discharger shall comply with the requirements in this Order.

I, Bruce H. Wolfe, Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on April 11, 2007.

_____

Bruce H. Wolfe, Executive Officer

Table of Contents

List of Tables

List of Attachments

Attachment G – The following documents are part of this Permit, but are not physically attached due to volume. They are available on the internet at *www.waterboards.ca.gov/sanfranciscobay/*

- Standard Provisions and Reporting Requirements, August 1993
- Self-Monitoring Program, Part A, adopted August 1993
- August 6, 2001 Staff Letter: Requirement for Priority Pollutant Monitoring in Receiving Water and Wastewater Discharges Resolution 74-10: Policy Regarding Waste Discharger's Responsibilities to Develop and Implement Contingency Plans

I. FACILITY INFORMATION

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order.

Table 4. Facility Information

Discharger	C&H Sugar Company, Inc. and Crockett Community Services District (CSD)
Name of Facility	C&H Sugar Refinery, Joint C&H-CSD Philip F. Meads Water Treatment Plant, and CSD's collection system
Facility Address	830 Loring Avenue Crockett, CA 94525 Contra Costa County
Facility Contact, Title, and Phone	Elizabeth M. Crowley, Environmental Compliance Manager, C&H Sugar Company, 510-787-4352 Kent Peterson, General Manager, Crockett Community Services District, 510-787-2992
Mailing Address	C&H - 830 Loring Avenue, Crockett, CA 94525 CSD - P.O. Box 578, Crockett, California 94525
Type of Facility	Cane Sugar Refining / privately owned wastewater treatment plant
Facility Design Flow	35 MGD for once-through cooling water discharge through 001 1.78 MGD secondary treated wastewater for discharge through 002

II. FINDINGS

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Regional Water Board), finds:

A. Background. C&H Sugar Company, Inc. (hereinafter C&H), and the Crockett Community Services District (hereinafter CSD), collectively the Discharger or Dischargers, submitted a Report of Waste Discharge, dated October 15, 2004, and applied for an NPDES permit reissuance to discharge once-through cooling water and treated wastewater from C&H facilities located at 830 Loring Avenue in Crockett, Contra Costa County.

Both C&H and CSD signed a Joint-Use Agreement on November 9, 1976, such that the C&H Refinery wastewater and municipal sewage from the Crockett area are treated at the Joint C&H-CSD Philip F. Meads Water Treatment Plant (hereinafter the Joint Treatment Plant, or JTP). The Dischargers jointly own the JTP, and C&H is the operator.

B. Facility Description.

1. C&H owns and operates a sugar refinery for refining raw cane sugar (hereinafter the Refinery) at 830 Loring Avenue, Crockett, Contra Costa County. The Refinery processes raw cane sugar at an average melt rate of 3,300 tons per day over approximately 260 operating days per year. Crystalline and liquid refined sugars are delivered to clients by both trucks and rail cars. The Refinery currently operates on a 7-day cycle with 5 days on and 2 days down. The Refinery discharges once-through cooling water and condensed vapor, untreated, through Discharge Point 001 to

Carquinez Strait within Northern San Francisco Bay, a water of the United States. The annual average discharge flow rates though Discharge Point 001 during 2002 to 2005 ranged from 13.7 to 22.5 MGD. Sugar refining process wastewater (e.g., char washings, scum filter aid slurries, refinery equipment wash water, railcar washings, truck washings, and contaminated storm water runoff from process areas) with an annual average flow rate of approximately 0.45 MGD is processed through the primary wastewater treatment plant (PWTP) at the Refinery. Solids removed from PTWP are dewatered on a belt filter and loaded on a truck for off-site disposal as soil amendment.

2. Municipal sewage from the community of Crockett is collected, comminuted, and degritted by CSD. Crockett is a small community with few industrial activities. Municipal sewage from CSD mainly consists of wastewater from residential and commercial sources, and inflow/infiltration. After preliminary treatment, the sewage is pumped to the JTP for secondary treatment and disinfection prior to discharge. The annual average flow from the CSD to the JTP is approximately 0.33 MGD. All the grit removed by the District is hauled to a permitted Class III disposal site.

3. The JTP is an activated sludge wastewater treatment facility that treats primary treated sugar refining wastewater and pretreated (comminuted and de-gritted) domestic wastewater from CSD. The Refinery's sanitary wastes and tank truck washings, which account for less than 0.01 MGD, are combined with the pretreated sewage from CSD. The average dry weather design flow (ADWF) from CSD to the JTP is 0.3 MGD. During wet weather, the peak wet weather flow may increase to 3.3 MGD. Excess sewage, which is due to storm water inflow/infiltration, is temporarily stored in CSD's storm water surge tanks prior to returning it to the JTP for treatment. During wet weather, peak flows are stored in the JTP storm water surge tank prior to introduction into the initial surge tank at the beginning of the treatment process for equalization. The treated wastewater is discharged through Discharge Point 002 to the Carquinez Strait.

   Both discharges 001 and 002 discharge through deep water outfalls to Carquinez Strait.

4. **Biosolids Treatment.** Waste biosolids from the dissolved air clarifiers at the JTP are dewatered by belt presses, mixed with lime if stabilization is necessary, and discharged to a truck for off-site disposal. Liquor removed from belt-presses is combined with washings, waste samples, drips, storm water, and other process waters in a plant sump, and returned to the initial surge tank at the beginning of the treatment process.

5. As described in Table 2 and the attached Fact Sheet (**Attachment F**), C&H has several storm water discharge outfalls to discharge the storm water collected at the Refinery, which are regulated by this Order. This Order includes a provision requiring C&H to submit an updated Storm Water Pollution Prevention Plan (SWPPP) and Best Management Practices Plan (BMPP) to reflect the up-to-date storm water pollution prevention and best management practices in place at the Refinery.

Attachment B to this Order is a Location Map showing the location of the C&H facility within the region; **Attachment C** is a flow schematic of the treatment plant.

C. Legal Authorities. This Order is issued pursuant to CWA Section 402 and implementing regulations adopted by the USEPA and CWC Chapter 5.5, Division 7. It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to CWC Article 4, Chapter 4 for discharges that are not subject to regulation under CWA Section 402.

D. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and through special studies. **Attachments A** through **G**, which contain background information and rationale for requirements of the Order, are hereby incorporated into this Order and, thus, constitute part of the Findings for this Order.

E. California Environmental Quality Act (CEQA). This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with CWC Section 13389.

F. Technology-Based Effluent Limitations. NPDES regulations at 40 CFR 122.44 (a) require permits to include applicable technology-based limitations and standards. This Order includes technology-based effluent limitations, which are based on:

- San Francisco Bay Region Basin Plan, Table 4-2, effluent limits for all treatment facilities,
- Effluent Limitations Guidelines for the Sugar Processing Point Source Category, established at 40 CFR 409 Subpart B (Crystalline Cane Sugar Refining Subcategory), and
- Best professional judgment (BPJ) pursuant to CWA Section 402 (a) (1) (B) and NPDES regulations at 40 CFR 125.3.

A detailed discussion of the technology-based effluent limitations is included in the Fact Sheet (**Attachment F**).

G. Water Quality-Based Effluent Limitations. Section 122.44(d) requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) may be established: (1) using USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) on an indicator parameter for the pollutant of concern; or (3) using a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

H. Water Quality Control Plans. The Water Quality Control Plan for the San Francisco Bay Basin (hereinafter Basin Plan) is the Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the

State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Water Board and approved by the State Water Resources Control Board, Office of Administrative Law and the U.S. EPA, where required. Beneficial uses applicable to Carquinez Strait within the Suisun Basin are as follows.

Table 5. Basin Plan Beneficial Uses of Carquinez Strait

Discharge Point	Receiving Water Name	Beneficial Use(s)
001 and 002	Carquinez Strait	• Industrial Service Supply (IND) • Ocean, Commercial, and Sport Fishing (COMM) • Estuarine Habitat (EST) • Fish Migration (MIGR) • Preservation of Rare and Endangered Species (RARE) • Water Contact Recreation (REC-1) • Noncontact Water Recreation (REC-2) • Fish Spawning (SPWN) • Wildlife Habitat (WILD) • Navigation (NAV).

Requirements of this Order implement the Basin Plan.

I. Thermal Plan. The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for surface waters. Requirements of this Order implement the Thermal Plan.

J. National Toxics Rule (NTR) and California Toxics Rule (CTR). USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

K. State Implementation Policy. On March 2, 2000, the State Water Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Boards in their basin plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by USEPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP became effective on May 18, 2000. The State Water Board subsequently amended the SIP on February 24, 2005, and the amendments became effective on July 31, 2005. The SIP includes procedures for determining the need for and calculating WQBELs and requires dischargers to submit data sufficient to do so. Requirements of this Order implement the SIP.

L. Compliance Schedules and Interim Requirements. Section 2.1 of the SIP provides that, based on a discharger's request and demonstration that it is infeasible for an existing discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under Section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds one year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement new or revised WQOs. This Order includes compliance schedules and interim effluent limitations. A detailed discussion of the basis for the compliance schedules and interim effluent limitations is included in the Fact Sheet (Attachment F).

M. Alaska Rule. On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 C.F.R. § 131.21; 65 Fed. Reg. 24641; (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000 must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

N. Stringency of Requirements for Individual Pollutants. This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. The technology-based effluent limitations consist of restrictions on biochemical oxygen demand (BOD), total suspended solids (TSS), and pH. Restrictions on these pollutants are specified in federal regulations and are no more stringent than required by the CWA. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR 131.21 (c) (1). The remaining water quality objectives and beneficial uses implemented by this Order [those for arsenic, cadmium, chromium (VI), copper (fresh water), lead, nickel, silver (1-hour), and zinc] were approved by USEPA on January 5, 2005, and are applicable water quality standards pursuant to 40 CFR 131.21 (c) (2). Collectively, this Order's restrictions on individual pollutants are no more

stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

O. Antidegradation Policy. Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet the permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.

P. Anti-Backsliding Requirements. CWA Sections 402 (o) (2) and 303 (d) (4) and NPDES regulations at 40 CFR 122.44 (l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. As discussed in detail in the Fact Sheet (**Attachment F**), the prohibitions, limitations, and conditions of this Order are consistent with applicable federal and State anti-backsliding requirements.

Q. Monitoring and Reporting. Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in **Attachment E**. The MRP may be amended by the Executive Officer pursuant to USEPA regulation 40 CFR 122.62, 122.63, and 124.5.

R. Standard and Special Provisions. Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in **Attachment D**. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger (**Attachment G**). A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.

S. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections IV.C, IV.D, V.B, and VI.C of this Order are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

T. Notification of Interested Parties. The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and

recommendations. Details of notification are provided in the Fact Sheet (**Attachment F**) of this Order.

U. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet (**Attachment F**) of this Order.

III. DISCHARGE PROHIBITIONS

A. The discharge of any wastewater at a location or in a manner different from that described in this Order is prohibited.

B. The discharge of once-through cooling water from Discharge Point 001 and treated wastewater from Discharge Point 002 to Carquinez Strait at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1 is prohibited.

C. The use of algaecides or anti-fouling additives in the barometric condenser cooling water system, discharged at Discharge Point 001, is prohibited.

D. The bypass of untreated or partially treated wastewater to waters of the United States is prohibited, except as provided for in the conditions stated in 40 CFR 122.41(m)(4) and in A.13 of the Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993 (**Attachment G**).

E. Any sanitary sewer overflow that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited. Sanitary sewer overflows, if any, are the responsibility of CSD.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations for Discharge Point 001

Compliance with the effluent limitations shall be demonstrated at Discharge Point 001, with compliance measured at Monitoring Location M-001 as described in the attached MRP (**Attachment E**).

1. Biochemical Oxygen Demand (BOD). The BOD_5 of the discharge shall not exceed the following limits:

Constituent	Units	Maximum Daily	Monthly Average
BOD_5	lbs/day	6,700	2,200

[1] This effluent limitation is based on a sugar melt rate of 3,300 tons/day and the effluent limits as defined at 40 CFR 409 Subpart B. The resulting mass loading limits are rounded to two significant figures.

[2] Compliance with the maximum daily effluent limitation for BOD_5 shall be determined by evaluating the mass (lbs/day) of BOD_5 discharged at Discharge Point 001 during the calendar day that sampling occurs. The mass (lbs/day) of BOD_5 discharged shall be determined in accordance with the following equation:

lbs/day BOD_5 = [BOD_5 effluent concentration (mg/L) at Discharge Point 001] x effluent flow (MGD) at Discharge Point 001 x 8.34

where: Conversion factor (8.34) in [(L•lb)/(gallon•kg)] = 3.7854 L/gallon x 2.2 lbs/kg

[3] Compliance with the monthly average effluent limitation for BOD_5 shall be determined by averaging all daily values (lbs/day) as determined above in each calendar month.

2. pH. The pH of the discharge at Discharge Point 001 shall not be less than 6.0 nor greater than 9.0.

The Discharger may elect to use a continuous on-line monitoring system(s) for measuring pH. If the Discharger employs continuous monitoring, then the Discharger shall be in compliance with the pH limitation specified herein, provided that both of the following conditions are satisfied:

(i) The total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and

(ii) No individual excursion from the range of pH values shall exceed 60 minutes.

3. Final Effluent Limitations for Toxics Substances (Discharge Point 001).

a. The discharge of effluent at Discharge Point 001 shall not exceed the following limitations.

Table 6. Final Effluent Limitations for Discharge Point 001 - Toxic Pollutants

Constituent	Units	Final Effluent Limitations[1][2]	
		AMEL	MDEL
Arsenic	µg/L	290	510
Copper [3]	µg/L	96	150
Lead	µg/L	3.7	8.3
Mercury [4][5]	µg/L	0.018	0.046
Nickel	µg/L	200	480
Selenium [4]	µg/L	3.9	8.7
Zinc	µg/L	250	590
Cyanide [4][6][7]	µg/L	3.2	6.4
TCDD TEQ [8]	µg/L	1.4×10^{-8}	2.8×10^{-8}
Bis (2-ethylhexly) phthalate	µg/L	54	110

Footnotes for Table 6:

[1] a. All analyses shall be performed using current USEPA methods, or equivalent methods approved in writing by the Executive Officer.

c. Limitations apply to the average concentration of all samples collected during the averaging period (daily = 24-hour period; monthly = calendar month).

d. All metal limitations are total recoverable.

[2] A daily maximum or average monthly value for a given constituent shall be considered noncompliant with the effluent limitations only if it exceeds the effluent limitation and the

Reporting Level for that constituent. As outlined in Section 2.4.5 of the SIP, the table below indicates the Minimum Level (ML) upon which the Reporting Level is based for compliance determination purposes. An ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Constituent	ML (μg/L)
Arsenic	1
Copper	2
Lead	0.5
Mercury	0.0005
Nickel	1
Selenium	1
Zinc	1
Cyanide	5
Bis(2-ethylhexyl) phthalate	5

[3] Alternate Effluent Limits for Copper:

a. If a copper SSO for the receiving water becomes legally effective, resulting in adjusted saltwater chronic objective of 2.5 µg/L and acute objective of 3.9 µg/L as documented in the *Copper Site-Specific Objectives in San Francisco Bay, Proposed Basin Plan Amendment and Draft Staff Report, dated March 2, 2007*, upon its effective date, the following limitations shall supersede those copper limitations listed in Table 6 (the rationale for these effluent limitations can be found in the Fact Sheet [**Attachment F**]).

MDEL of 120 μg/L and AMEL of 76 μg/L.

b. If a different copper SSO for the receiving water is adopted, the alternate WQBELs based on the SSO will be determined after the SSO effective date.

[4] Final effluent limitations for mercury, selenium, and cyanide shall become effective on April 28, 2010. The Regional Water Board may amend these final effluent limitations prior to this date in accordance with TMDLs or SSOs that become effective subsequent to the effective date of this Order.

[5] Effluent mercury monitoring shall be performed using ultra-clean sampling and analysis techniques, with a method detection limit of 0.0002 μg/L or lower, or a ML of 0.0005 μg/L or lower.

[6] Compliance may be demonstrated by measurement of weak acid dissociable cyanide.

[7] Alternate Effluent Limits for Cyanide:

a. If a cyanide SSO for the receiving water becomes legally effective, resulting in adjusted saltwater chronic objective of 2.9 µg/L and acute objective of 9. 4 µg/L (based on Regional Water Board Resolution R2-2006-0086), upon its effective date, the following limitations shall supersede those cyanide limitations, above (the rationale for these effluent limitations can be found in the Fact Sheet [**Attachment F**]).

MDEL of 42 μg/L and AMEL of 21 μg/L.

b. If a different cyanide SSO for the receiving water is adopted, the alternate WQBELs based on the SSO will be determined after the SSO effective date.

[8] Final effluent limitations TCDD TEQ shall become effective on June 1, 2017. The Regional Water Board may amend these final effluent limitations prior to this date in accordance with TMDLs that become effective subsequent to the effective date of this Order.

b. **Intake Water Credit.** The Discharger has met the conditions specified in Section 1.4.4, Intake Water Credits, of the SIP as discussed in detail in the Fact Sheet (**Attachment F**). The Discharger qualifies to receive intake water credits for arsenic, copper, lead, mercury, nickel, selenium, zinc, cyanide, and bis(2-ethylhexyl)phthalate applicable toward the concentration-based effluent limitations specified in IV.A.3.a of this Order. These credits are to offset any concentrations of the pollutant found in the intake water, and are only allowed on a pollutant-by-pollutant and discharge-by-discharge basis. Furthermore, these credits are only applicable upon each specific discharge event, and compliance with the concentration-based limitations specified in IV.A.3.a of this Order shall be assessed as follows:

(1) **Monitoring Requirements.** The Discharger shall monitor the pollutant concentrations in the intake and in the effluent (at Monitoring Locations M-INF-001 and M-001, respectively) during the same day.

(2) **Compliance Evaluation.** If an effluent concentration exceeds the effluent limits specified in IV.A.3.a, IV.A.4.a., and IV.C.1 this Order, the Discharger may use intake water credits when determining compliance. In this case, (a) if the intake water concentration sampled during the same day is higher than the effluent concentration, or (b) if it can be statistically demonstrated that the effluent concentration is not significantly higher than the intake water concentrations (see attached Fact Sheet [**Attachment F**] for an statistical analysis example for this purpose), then the concentration and mass-based effluent limitations specified in IV.A.3.a, IV.A.4.a., and IV.C.1 of this Order are not applicable, and therefore, the discharge is in compliance. Otherwise, the effluent must comply with the effluent limitations specified in IV.A.3.a, IV.A.4.a., and IV.C.1 of this Order.

4. Interim Effluent Limitations for Toxic Pollutants

a. The following interim effluent limitations shall become effective upon the effective date of this Order and shall remain effective for the time periods indicated in the table below:

Table 7. Interim Effluent Limitations for Discharge Point 001 -Toxic Pollutants

Constituent	Units	Interim Effluent Limitations	
		MDEL	Effective Period
Mercury	µg/L	0.16	Permit effective date through April 27, 2010
Selenium	µg/L	26	Permit effective date through April 27, 2010
Cyanide	µg/L	5	Permit effective date through April 27, 2010

b. **Intake water credit.** The intake credit provision in IV.A.3.b above also applies to mercury and selenium interim limitations in this section.

B. Effluent Limitations for Discharge Point 002

Compliance with the effluent limitations shall be demonstrated at Discharge Point 002, with compliance measured at Monitoring Location M-002 as described in the attached MRP (**Attachment E**).

1. Effluent Limitations for Conventional and Non-Conventional Pollutants

Discharge of conventional and non-conventional pollutants at Discharge Point 002 shall be limited as follows:

Table 8. Effluent Limitations – Conventional and Non-Conventional Pollutants (Discharge Point 002)

Constituent	Units	Effluent Limitations			
		Maximum Daily	Monthly Average	Instantaneous Minimum	Instantaneous Maximum
BOD_5[1]	lbs/day	2,000 [2]	730 [3]	---	---
TSS[1]	lbs/day	2,600 [2]	730 [3]	---	---
pH[4]	s.u.	---	---	6.0	9.0
Oil and Grease	mg/L	20	10	---	---
Total Chlorine Residual[5]	mg/L	---	---	---	0.0
Settleable Matter					
Before April 18, 2010	mL/L/hr	2.0	1.0	---	---
After April 18, 2010	mL/L/hr	0.2	0.1	---	---

Footnotes for Table 8:

[1] These effluent limitations are based on a raw sugar melt rate of 3,300 tons/day at the Refinery, and a maximum daily average flow rate of 1.67 MGD and a maximum monthly average flow rate of 0.54 MGD of municipal wastewater flow from CSD during 2002 through 2005 for maximum daily and monthly average effluent limitation calculation, respectively. The resulting mass loading limits are rounded to two significant figures.

[2] Compliance with the maximum daily effluent limitations for BOD_5 and TSS shall be determined by evaluating the mass (lbs/day) of BOD_5 and TSS discharged at Discharger Point 002 (as monitored at M-002 as described in the attached Monitoring and Reporting Program or MRP, **Attachment E)**. The mass (lbs/day) of BOD_5 and TSS discharged shall be determined in accordance with the following equations:

- lbs/day BOD_5 = BOD_5 concentration (mg/L) at Discharge Point 002 x effluent flow (MGD) at Discharge Point 002 x 8.34
- lbs/day TSS = TSS concentration (mg/L) at Discharge Point 002 x effluent flow (MGD) at Discharge Point 002 x 8.34

where: Conversion factor (8.34) in [(L•lb)/(gallon•kg)] = 3.7854 L/gallon x 2.2 lbs/kg

[3] Compliance with the monthly average effluent limitations for BOD_5 and TSS shall be determined by averaging all daily values (lbs/day) determined as above.

[4] If the Discharger employs continuous monitoring, pursuant to 40 CFR § 401.17, the Discharger shall be in compliance with the pH limitation specified herein, provided that both of the following conditions are satisfied: (i)The total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (ii) No individual excursion from the range of pH values shall exceed 60 minutes.

[5] The chlorine residual requirement is defined as below the limit of detection by standard methods of analysis, as defined in *Standard Methods for the Examination of Water and Wastewater*. The Discharger may elect to use a continuous on-line monitoring system(s) for measuring flows, chlorine and sodium bisulfite dosage (which could be interpolated), and chlorine concentration to prove that chlorine residual exceedances are false positives. If convincing evidence is provided, Regional Water Board staff may conclude that these false positive chlorine residual exceedances are not violations of this permit limitation.

2. **Total Coliform Bacteria.** The median concentration of total coliform bacteria in 5 consecutive effluent samples of the discharge at Discharge Point 002 shall not exceed 240 MPN/100 mL. No single sample shall exceed 10,000 MPN/100mL.

3. **Final Effluent Limitations for Toxic Pollutants.** The discharge of effluent at Discharge Point 002, as monitored at M-002, shall not exceed the following limitations.

Table 9. Final Effluent Limitations for Discharge Point 002 - Toxic Pollutants

Constituent	Units	Final Effluent Limitations[1][2]	
		AMEL	MDEL
Copper [3]	µg/L	88	150
Lead	µg/L	3.6	9.7
Mercury [4][5]	µg/L	0.012	0.038
Cyanide [4][6][7]	µg/L	2.9	6.4
TCDD TEQ [8]	µg/L	1.4×10^{-8}	2.8×10^{-8}
Bis (2-ethylhexyl) phthalate	µg/L	54	110

Footnotes for Table 9:

[1] a. All analyses shall be performed using current USEPA methods, or equivalent methods approved in writing by the Executive Officer.

c. Limitations apply to the average concentration of all samples collected during the averaging period (daily = 24-hour period; monthly = calendar month).

d. All metal limitations are total recoverable.

[2] A daily maximum or average monthly value for a given constituent shall be considered noncompliant with the effluent limitations only if it exceeds the effluent limitation and the Reporting Level for that constituent. As outlined in Section 2.4.5 of the SIP, the table below indicates the Minimum Level (ML) upon which the Reporting Level is based for compliance determination purposes. An ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Constituent	ML (μg/L)
Copper	2
Lead	0.5
Mercury	0.0005
Cyanide	5
Bis(2-ethylhexyl) phthalate	5

[3] Alternate Effluent Limits for Copper:

a. If a copper SSO for the receiving water becomes legally effective, resulting in adjusted saltwater chronic objective of 2.5 µg/L and acute objective of 3.9 µg/L as documented in the *Copper Site-Specific Objectives in San Francisco Bay, Proposed Basin Plan Amendment and Draft Staff Report, dated March 2, 2007,* upon its effective date, the following limitations shall supersede those copper limitations listed in Table 9 (the rationale for these effluent limitations can be found in the Fact Sheet [**Attachment F**]).

MDEL of 120 μg/L and AMEL of 70 μg/L.

b. If a different copper SSO for the receiving water is adopted, the alternate WQBELs based on the SSO will be determined after the SSO effective date.

[4] Final effluent limitations for mercury and cyanide shall become effective on April 28, 2010. The Regional Water Board may amend these final effluent limitations prior to this date in accordance with TMDLs or SSOs that become effective subsequent to the effective date of this Order.

[5] Effluent mercury monitoring shall be performed using ultra-clean sampling and analysis techniques, with a method detection limit of 0.0002 μg/L or lower (or a ML of 0.0005 μg/L or lower).

[6] Compliance may be demonstrated by measurement of weak acid dissociable cyanide.

[7] Alternate Effluent Limits for Cyanide:

a. If a cyanide SSO for the receiving water becomes legally effective, resulting in adjusted saltwater chronic objective of 2.9 µg/L and acute objective of 9.4 µg/L (based Regional Water Board Resolution R2-2006-0086), upon its effective date, the following limitations shall supersede those cyanide limitations, above (the rationale for these effluent limitations can be found in the Fact Sheet [**Attachment F**]).

MDEL of 44 μg/L and AMEL of 20 μg/L.

b. If a different cyanide SSO for the receiving water is adopted, the alternate WQBELs based on the SSO will be determined after the SSO effective date.

[8] Final effluent limitations TCDD TEQ shall become effective on June 1, 2017. The Regional Water Board may amend these final effluent limitations prior to this date in accordance with any TMDLs that become effective subsequent to the effective date of this Order.

4. Interim Effluent Limitations for Toxic Pollutants at Discharge Point 002

The following interim effluent limitations shall become effective upon the effective date of this Order and shall remain effective for the time periods indicated in the table below:

Table 10. Interim Effluent Limitations for Discharge Point 002 – Toxic Pollutants

Constituent	Units	Interim Effluent Limitations		
		MDEL	AMEL	Effective Period
Mercury	µg/L	1.0	0.21	Permit effective date through April 27, 2010
Cyanide	µg/L	22.8	---	Permit effective date through April 27, 2010

5. Whole Effluent Acute Toxicity. Representative samples of the discharge at Discharge Point 002 shall meet the following limits for acute toxicity. Compliance with these limits shall be achieved in accordance with Section V.A of the attached MRP (**Attachment E**).

a. The survival of bioassay test organisms in 96-hour flow-through bioassays of undiluted effluent shall be:

(1) An eleven (11)-sample median value of not less than 90 percent survival; and

(2) An eleven (11)-sample 90th percentile value of not less than 70 percent survival.

b. These acute toxicity limits are further defined as follows:

(1) 11-sample median limit:

Any bioassay test showing survival of 90 percent or greater is not a violation of this limit. A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit if five or more of the past ten or fewer bioassay tests also show less than 90 percent survival.

(2) 90th percentile limit:

Any bioassay test showing survival of 70 percent or greater is not a violation of this limit. A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit if one or more of the past ten or fewer bioassay tests also show less than 70 percent survival.

c. Bioassays shall be performed using the most up-to-date USEPA protocol and the most sensitive species as specified in writing by the Executive Officer based on the most recent screening test results. Bioassays shall be conducted in compliance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms," currently 5th Edition (EPA-821-R-02-012), with exceptions granted to the Discharger by the Executive

Officer and the Environmental Laboratory Accreditation Program (ELAP) upon the Discharger's request with justification.

d. If the Discharger can demonstrate to the satisfaction of the Executive Officer that toxicity exceeding the levels cited above is caused by ammonia and that the ammonia in the discharge is not adversely impacting receiving water quality or beneficial uses, then such toxicity does not constitute a violation of this effluent limitation.

6. Whole Effluent Chronic Toxicity.

a. Compliance with the Basin Plan narrative toxicity objective shall be demonstrated according to the following tiered requirements based on results from representative samples of the treated effluent at Discharge Point 002 meeting test acceptability criteria and Section V.B of the MRP (**Attachment E**):

(1) Conduct routine monitoring;

(2) Accelerate monitoring after exceeding a single sample maximum value of 10 TUc[1].

(3) Return to routine monitoring if accelerated monitoring does not exceed the "trigger" in (2) above;

(4) If accelerated monitoring confirms consistent toxicity above the "trigger" in (2), above, initiate toxicity identification evaluation/toxicity reduction evaluation (TIE/TRE) in accordance with a workplan submitted in accordance with Section V.B of the MRP (**Attachment E**), and that incorporates any and all comments from the Executive Officer;

(5) Return to routine monitoring after appropriate elements of TRE workplan are implemented and either the toxicity drops below "trigger" level in (2), above or, based on the results of the TRE, the Executive Officer authorizes a return to routine monitoring.

b. *Test Species and Methods*: The Discharger shall conduct routine monitoring with the most sensitive species determined during the chronic toxicity screening study performed by the Discharger and approved by the Executive Officer. Chronic Toxicity Monitoring Screening Phase Requirements, Critical Life Stage Toxicity Tests and definitions of terms used in the chronic toxicity monitoring are identified in **Appendix E** of the MRP (**Attachments E-1** and **E-2**). In addition, bioassays shall be conducted in compliance with the most recently promulgated test methods, "Short-term Methods for Estimating the Chronic Toxicity of

[1] A TUc equals 100 divided by the no observable effect level (NOEL). The NOEL is determined from IC, EC, or NOEC values. These terms, their usage, and other chronic toxicity monitoring program requirements are defined in more detail in the MRP (**Attachment E**). Monitoring and TRE requirements may be modified by the Executive Officer in response to the degree of toxicity detected in the effluent or in ambient waters related to the discharge.

Effluents and Receiving Waters to Freshwater Organisms," currently 4th Edition (EPA-821-R-02-013), with exceptions granted by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).

C. Interim Mercury Mass Emission Effluent Limitations:

Until TMDL and WLA efforts for mercury provide enough information to establish a different WQBEL, the Discharger shall demonstrate that the current mercury mass loading to the receiving water does not increase by complying with the following:

1. **Mass limit for 001.** The 12-month moving average annual load for mercury shall not exceed 0.080 kilograms per month (kg/mo). Compliance shall be calculated using 12-month moving average loadings from Discharge 001 to the receiving water for the entire year. However, if it is determined that a specific monthly sample qualifies for intake water credit, the mass limit will not apply to that specific month.

2. **Mass limit for 002.** The 12-month moving average annual load for mercury shall not exceed 0.026 kg/mo. Compliance shall be calculated using 12-month moving average loadings to the receiving water from Discharge 002 for the entire year.

3. **Compliance determination method.** Compliance for each month will be determined based on the 12-month moving averages over the previous 12 months of monitoring calculated using the method described below:

   Monthly mass emission loading, in kg/mo = Flow, in mgd x Concentration, in µg/L x 0.1151

   12-month moving average Hg mass loading = Running average of last 12 monthly mercury mass loadings, in kg/mo

   Where:
   0.1151—conversion factor

   If more than one mercury measurement is obtained in a calendar month, the average of the calculated mass loadings for the sampling days is used as the monthly value for that month. If the results are less than the method detection limit used, the concentrations are assumed to be equal to the method detection limit.

4. **Mercury Final Limits.** The Regional Water Board intends to amend this Order in accordance with the mercury TMDL and WLAs. The Clean Water Act's anti-backsliding rule, Section 402(o), indicates that this Order may be modified to include a less stringent requirement following adoption of the TMDL and WLA, if the requirements for an exception to the rule are met.

D. Land Discharge Specifications

N/A

E. Reclamation Specifications

N/A

F. Storm Water Limitations

The discharge of storm water runoff Wastes 003 through and including 016 outside the pH range or containing constituents in excess of the following limits is prohibited:

Constituent	Units	Limitation
pH	standard units	6.5 to 8.5
Visible oil	---	none observed
Visible color	---	none observed

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Discharge to Carquinez Strait shall be limited as follows:

1. Temperature shall be limited as follows:

   a. Discharges, either individually or combined with other discharges, shall not create a zone, defined by water temperatures of more than 1ºF above natural receiving water temperature, that exceeds 25 percent of the cross sectional area of Carquinez Strait at any point.

   b. Discharges shall not cause a surface temperature rise greater than 4ºF above the natural temperature of the receiving water at any time or place.

2. The discharge shall not cause the following conditions to exist at any place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam in concentrations that cause nuisance or adversely affect beneficial uses;

   b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;

   c. Alterations of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin; and

   e. Toxic or other deleterious substances to be present in concentrations or quantities, which will cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or which render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.

3. The discharge shall not cause nuisance, or adversely affect the beneficial uses of the receiving water.

4. The discharge shall not cause the following limits to be exceeded in waters of the State at any one place within one foot of the water surface:

   a. Dissolved Oxygen: 5.0 mg/L, minimum

      The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, then the discharges shall not cause further reduction in ambient dissolved oxygen concentrations.

   b. Dissolved Sulfide: 0.1 mg/L, maximum

   c. pH: The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH by more than 0.5 Standard Units.

   d. Un-ionized Ammonia: 0.025 mg/L as N, annual median; and 0.16 mg/L as N, maximum.

   e. Nutrients: Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

5. The discharge shall not cause a violation of any particular water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to CWA Section 303, or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

B. Groundwater Limitations

N/A

VI. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in **Attachment D** of this Order.

2. **Regional Water Board Standard Provisions.** The Discharger shall comply with all applicable items of the attached *Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993* (the Standard Provisions, **Attachment G**), and any amendment thereto. Where provisions or reporting requirements specified in this Order are different from equivalent or related provisions or reporting requirements given in the Standard Provisions (**Attachment G**), the specifications of this Order shall apply. Duplicative requirements in the federal Standard Provisions in VI.A.1.2, above (**Attachment D**) and the regional Standard Provisions (**Attachment G**) are not separate requirements. A violation of a duplicative requirement does not constitute two separate violations.

B. Monitoring and Reporting Program Requirements

The Discharger shall comply with the Monitoring and Reporting Program, and future revisions thereto, in **Attachment E**. The Discharger shall also comply with the requirements contained in *Self-Monitoring Program, Part A, August 1993* (**Attachment G)**.

C. Special Provisions

1. Reopener Provisions

The Regional Water Board may modify or reopen this Order prior to its expiration date in any of the following circumstances as allowed by law:

a. If present or future investigations demonstrate that the discharge(s) governed by this Order will or have a reasonable potential to cause or contribute to, or will cease to, have adverse impacts on water quality and/or beneficial uses of the receiving waters.

b. If new or revised WQOs, or TMDLs come into effect for the San Francisco Bay estuary and contiguous water bodies (whether statewide, regional, or site-specific). In such cases, effluent limitations in this Order will be modified as necessary to reflect updated WQOs and waste load allocations in TMDLs. Adoption of effluent limitations contained in this Order is not intended to restrict in any way future modifications based on legally adopted WQOs, TMDLs, or as otherwise permitted under Federal regulations governing NPDES permit modifications.

c. If translator or other water quality studies provide a basis for determining that a permit condition(s) should be modified.

d. If administrative or judicial decision on a separate NPDES permit or WDR that addresses requirements similar to this discharge.

e. Or as otherwise authorized by law.

The Dischargers may request permit modification based on the above. The Dischargers shall include in any such request an antidegradation and antibacksliding analysis.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Effluent Monitoring.

The Discharger shall continue to monitor and evaluate the discharge from Outfalls 001 and 002 (measured at M-001 and M-002) for the constituents listed in Enclosure A of the Regional Water Board's August 6, 2001 Letter, according to the sampling frequency specified in the attached MRP **(Attachment E)**. Compliance with this requirement shall be achieved in accordance with the specifications stated in the Regional Water Board's August 6, 2001 Letter under Effluent Monitoring for Minor Discharger.

The Discharger shall evaluate on an annual basis if concentrations of any constituent increase over past performance. The Discharger shall investigate the cause of the increase. The investigation may include, but need not be limited to, an increase in the effluent monitoring frequency, monitoring of internal process streams, and monitoring of influent sources. This may be satisfied through identification of these constituents as "Pollutants of Concern" in the Discharger's Pollutant Minimization Program described in Provision VI.C.3.a, below. A summary of the annual evaluation of data and source investigation activities shall also be reported in the annual self-monitoring report.

A final report that presents all the data shall be submitted to the Regional Water Board no later than 180 days prior to the Order expiration date. This final report shall be submitted with the application for permit reissuance.

b. Ambient Background Receiving Water Monitoring.

The Discharger shall collect or participate in collecting background ambient receiving water monitoring for priority pollutants that is required to perform a reasonable potential analysis (RPA) and to calculate effluent limitations. The data on the conventional water quality parameters (pH, salinity, and hardness) shall also be sufficient to characterize these parameters in the receiving water at a point after the discharge has mixed with the receiving waters. This provision may be met through monitoring through a collaborative ambient monitoring program for San Francisco Bay, such as the Regional Monitoring Program (RMP). This permit may be reopened, as appropriate, to incorporate effluent limits or other requirements based on Regional Water Board review of these data.

The Discharger shall submit a final report that presents all the data to the Regional Water Board 180 days prior to Order expiration. This final report shall be submitted with the application for permit reissuance.

c. Cooling Water Intake Impingement and Entrainment Study.

Before January 1, 2010, the Discharger shall submit to the Regional Water Board a *Cooling Water Intake Report and Sampling Plan*, which shall include the following components.

(1) A list and summary of historical studies characterizing baseline biological conditions in area of influence of the Refinery's cooling water intake structure(s); impingement and entrainment mortality attributed to the Refinery's cooling water intake structure(s); and the physical conditions of Carquinez Strait in the vicinity of the facility's cooling water intake structure(s). The Discharger shall describe the extent to which historical data are representative of current conditions and address whether the data were collected using appropriate quality assurance/quality control procedures.

(2) A summary of source water physical data and cooling water intake structure data that includes the following information:

i. A location map showing the location of the Refinery's cooling water intake structure;

ii. A narrative description and drawings showing the physical configuration of the source water body where the Refinery's cooling water intake structure(s) is located, including aerial dimensions, depths, salinity and temperature regimes;

iii. Characterization of the source water body's hydrological and geomorphological features that define the cooling water intake structure(s) area of influence within the water body;

iv. A description of where the Refinery's cooling water intake structure(s) is located within the water body and in the water column, including latitude and longitude;

v. A description of the operation of each cooling water intake structure, including design and actual (average and maximum) intake flows (volume, rate, velocity), daily hours of operation, number of days per year of operation and seasonal changes; and

vi. Engineering schematics of the cooling water intake structure(s).

(3) A summary of past and on-going consultations with federal, state, and local fish and wildlife agencies regarding environmental impacts of the facility's cooling water intake structure(s).

(4) A sampling plan for field studies to develop or update scientifically valid estimates of impingement and entrainment mortality attributed to the Refinery's cooling water intake structure(s). As necessary, the sampling plan shall provide for source water, baseline biological characterization in the vicinity of the cooling water intake structure(s), in addition to identifying/describing methods to estimate impingement mortality and entrainment.

Baseline biological characterization of the source water body shall (whether through a historic or proposed study), at a minimum, include the following information:

i. A list of species (or relevant taxa) for all life stages and their relative abundance in the vicinity of the cooling water intake structure(s).

ii. Identification of the species and life stages that would be most susceptible to impingement and entrainment. Species evaluated should include the forage base as well as those most significant to commercial and recreational fisheries.

iii. Identification and evaluation of the primary period of reproduction, larval recruitment, and periods of peak abundance for relevant taxa.

iv. Data representative of seasonal and daily activity (e.g., feeding and migration within the water column) of biological organisms within the vicinity of the cooling water intake structure(s).

v. Identification of all threatened, endangered, or protected species that might be susceptible to impingement and entrainment at the facility's cooling water intake structure(s).

Information provided by the Discharger in this study, and information resulting from subsequent studies, will be used by the Regional Water Board in its on-going determination of specific requirements for inclusion into the facility's NPDES permit and to establish the best technology available to minimize adverse environmental impacts associated with the facility's cooling water intake structure(s).

d. Optional Mass Offset.

If the Discharger can demonstrate that further net reductions of the total mass loadings of 303(d)-listed pollutants to the receiving water cannot be achieved through economically feasible measures, such as aggressive source control, wastewater reuse, and treatment plant optimization, but only through a mass offset program, the Discharger may submit to the Regional Water Board for approval a mass offset plan to reduce 303(d)-listed pollutants to the same watershed or drainage basin. The Regional Water Board may modify this Order to allow an approved mass offset program.

3. Best Management Practices and Pollution Minimization Program

a. Both C&H and CSD, acting as the Discharger, shall continue to improve, in a manner acceptable to the Executive Officer, the Discharger's existing Pollutant Minimization Program to reduce pollutant loadings to the treatment plant, and therefore, to the receiving waters.

b. The Discharger shall submit an annual report, acceptable to the Executive Officer, no later than February 28th of each calendar year. The annual report shall cover January through December of the preceding year. Each annual report shall include at least the following information:

(1) A brief description of its treatment facilities and treatment processes.

(2) A discussion of the current pollutants of concern. Periodically, the Discharger shall analyze its own situation to determine which pollutants are currently a problem and/or which pollutants may be potential future problems. This discussion shall include the reasons why the pollutants were chosen.

(3) Identification of sources for the pollutants of concern. This discussion shall include how the Discharger intends to estimate and identify sources of the pollutants. The Discharger shall also identify sources or potential sources not directly within the ability or authority of the Discharger to control, such as pollutants in the potable water supply and air deposition.

(4) Identification of tasks to reduce the sources of the pollutants of concern. This discussion shall identify and prioritize tasks to address the Discharger's pollutants of concern. The Discharger may implement tasks itself or participate in group, regional, or national tasks that will address its pollutants of concern. The Discharger is strongly encouraged to participate in group, regional, or national tasks that will address its pollutants of concern whenever it is efficient and appropriate to do so. A time-line shall be included for the implementation of each task.

(5) Outreach to employees and CSD rate payers. The Discharger (both C&H and CSD) shall inform employees and rate payers, respectively, about the pollutants of concern, potential sources, and how they might be able to help reduce the discharge of these pollutants of concern into the treatment facilities. The Discharger may provide a forum for employees to provide input to the Program.

(6) Discussion of criteria used to measure the Program's and tasks' effectiveness. The Discharger shall establish criteria to evaluate the effectiveness of its Pollution Minimization Program. This shall also include a discussion of the specific criteria used to measure the effectiveness of each of the tasks in item (b) (3, 4, and 5), above.

(7) Documentation of efforts and progress. This discussion shall detail all the Discharger's activities in the Pollution Minimization Program during the reporting year.

(8) Evaluation of Program's and tasks' effectiveness. The Discharger shall use the criteria established in (b) (6) to evaluate the Program's and tasks' effectiveness.

(9) Identification of Specific Tasks and Time Schedules for Future Efforts. Based on the evaluation, the Discharger shall detail how it intends to continue or change its tasks to more effectively reduce the amount of pollutants to the treatment plant, and subsequently in its effluent.

c. Pollutant Minimization Program for Pollutants with Effluent Limitations.

The Discharger shall develop and conduct a Pollutant Minimization Program (PMP) as further described below when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:

(1) A sample result is reported as DNQ and the effluent limitation is less than the RL; or

(2) A sample result is reported as ND and the effluent limitation is less than the MDL, using definitions described in the SIP.

d. If triggered by the reasons in c. above, the Discharger's PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

(1) An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling, or alternative measures approved by the Executive Officer when it is demonstrated that source monitoring is unlikely to produce useful analytical data;

(2) Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system, or alternative measures approved by the Executive Officer, when it is demonstrated that influent monitoring is unlikely to produce useful analytical data;

(3) Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;

(4) Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and

(5) The annual report required by 3.b. above, shall specifically address the following items:

i. All PMP monitoring results for the previous year;

ii. A list of potential sources of the reportable priority pollutant(s);

iii. A summary of all actions undertaken pursuant to the control strategy; and

iv. A description of actions to be taken in the following year.

4. Action Plan for Cyanide.

If and when the cyanide alternate limits in IV become effective, the Discharger shall implement an action plan for cyanide in accordance with the Basin Plan Amendment to adopt cyanide SSOs.

5. Action Plan for Copper

If and when the copper alternate limits in IV become effective, the Discharger shall initiate implementation of an action plan for copper in accordance with the Basin Plan Amendment to adopt copper SSOs.

6. Storm Water Pollution Prevention Plan and Best Management Practices Plan

a. C&H shall submit an updated Storm Water Pollution Prevention Plan (SWPPP) and Best Management Practices Plan (BMPP) either annually or sooner if there is a change in the operation of the Refinery, which may substantially affect the quality of the storm water discharged. Annual updates shall be submitted by July 1 of each year. If there is no change to either of these plans, then the annual updates shall be a letter indicating that the plan is unchanged. The Discharger shall implement the SWPPP and BMPP, and the SWPPP shall comply with the requirements contained in the attached Standard provisions (**Attachment G**.)

In any update of the SWPPP and BMPP, the Discharger shall (1) include at least an up-to-date drainage map for the facility; (2) identify on a map of appropriate scale the areas which contribute runoff to the permitted discharge points; (3) describe the activities in each area and the potential for contamination of storm water runoff and discharge of hazardous waste/material; and, (4) address the feasibility for containment and/or treatment of the storm water.

(1) The SWPPP shall describe site-specific management practices for minimizing storm water runoff from being contaminated, and for preventing contaminated storm water runoff from being discharged directly to waters of the State. It shall also include pollution prevention measures which are above and beyond

the current practices to further reduce and control sources of total organic carbon (TOC) and total suspended solids (TSS).

(2) The BMPP shall entail site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material from being discharged to waters of the State. The updated BMPP shall be consistent with the requirements of 40 CFR 125, Subpart K, and the general guidance contained in the "NPDES Best Management Guidance Document", USEPA Report No. 600/9-79-045, December 1979 (revised June 1981). In particular, a risk assessment of each area identified by C&H shall be performed to determine the potential of hazardous waste/material discharge to surface waters.

The SWPPP and BMPP may include time schedules for the completion of management practices and procedures. C&H shall begin implementing the SWPPP and BMPP within 10 calendar days of approval by the Executive Officer, unless otherwise directed.

b. C&H shall also submit an annual storm water report by July 1 of each year, covering data for the previous wet weather season for E-003 through E-016. The annual storm water report shall, at a minimum, include: (a) a tabulated summary of all sampling results and a summary of visual observations taken during the inspections; (b) a comprehensive discussion of the compliance record and any corrective actions taken or planned to ensure compliance with waste discharge requirements; and (c) a comprehensive discussion of source identification and control programs for constituents that do not have effluent limitations (e.g., total suspended solids.)

7. Construction, Operation and Maintenance Specifications

a. Wastewater Facilities, Review and Evaluation, and Status Reports.

(1) The Discharger shall operate and maintain its wastewater collection, treatment, and disposal facilities in a manner to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary, in order to provide adequate and reliable transport, treatment, and disposal of all wastewater from both existing and planned future wastewater sources under the Discharger's service responsibilities.

(2) The Discharger shall regularly review and evaluate its wastewater facilities and operation practices in accordance with section a.1 above. Reviews and evaluations shall be conducted as an ongoing component of the Discharger's administration of its wastewater facilities.

(3) The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its wastewater facilities and operation practices, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall also include, in each annual self-monitoring report, a description or summary of review and

evaluation procedures, and applicable wastewater facility programs or capital improvement projects.

b. Operations and Maintenance Manual (O&M), Review and Status Reports.

(1) The Discharger shall maintain an O&M Manual as described in the findings of this Order for the Discharger's wastewater facilities. The O&M Manual shall be maintained in usable condition and be available for reference and use by all applicable personnel.

(2) The Discharger shall regularly review, revise, or update, as necessary, the O&M Manual(s) so that the document(s) may remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and revisions or updates shall be completed as necessary. For any significant changes in treatment facility equipment or operation practices, applicable revisions shall be completed within 90 days of completion of such changes.

(3) The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its O&M manual, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall also include, in each annual self-monitoring report, a description or summary of review and evaluation procedures and applicable changes to its operations and maintenance manual.

c. Contingency Plan, Review and Status Reports.

(1) The Discharger shall maintain a Contingency Plan as required by Regional Water Board Resolution 74-10 (**Attachment G**) and as prudent in accordance with current municipal facility emergency planning. The discharge of pollutants in violation of this Order where the Discharger has failed to develop and/or adequately implement a Contingency Plan will be the basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

(2) The Discharger shall regularly review and update, as necessary, the Contingency Plan so that the plan may remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and updates shall be completed as necessary.

(3) The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its Contingency Plan review and update. The Discharger shall also include, in each annual self-monitoring report, a description or summary of review and evaluation procedures and applicable changes to its Contingency Plan.

8. Special Provisions

a. Sludge Management Practices Requirements.

(1) Permanent biosolids disposal activities at the JTP are not authorized by this Order.

(2) The treatment, disposal, storage, or processing of biosolids shall not cause waste material to be in any position where it is, or can be, carried from the biosolids treatment, disposal, storage, or processing site and deposited in waters of the State.

(3) The biosolids treatment, storage and handling site shall have facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the temporary storage site. Adequate protection is defined as protection from at least 100-year storm and protection from the highest possible tidal stage that may occur.

b. Sanitary Sewer Management Plan.

The CSD's collection system, excluding any satellite collection system, is part of CSD that is subject to this Order. As such, CSD shall properly operate and maintain its collection system as required by **Attachment D**, Standard Provisions – Permit Compliance, subsection I.D. This Order does not authorize discharges from CSD's collection system to waters of the United States. In the event there is a discharge from CSD's collection system to waters of the United States, CSD shall report the discharge as required by **Attachment D**, Standard Provisions – Reporting, subsections V.E.1 and V.E.2 of this Order. If there is such a discharge, it shall be CSD's duty to mitigate the discharge as required by **Attachment D**, Standard Provisions – Permit Compliance, subsection I.C. The General Waste Discharge Requirements for Collection System Agencies (Order No. 2006-0003 DWQ) also have requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. While CSD must comply with both the General Waste Discharge Requirements for Collection System Agencies (General Collection System WDR) and this Order, the General Collection System WDR more clearly and specifically stipulates requirements for operation and maintenance and for reporting and mitigating sanitary sewer overflows. Implementation of the General Collection System WDR requirements for proper operation and maintenance and mitigation of spills will satisfy the corresponding federal NPDES requirements specified in this Order. Following reporting requirements in the General Collection System WDR will satisfy NPDES reporting requirements for sewage spills. Furthermore, CSD has agreed to, and shall, comply with the schedule for development of sewer system management plans (SSMPs) as indicated in the letter issued by the Regional Water Board on July 7, 2005, pursuant to Water Code Section 13267. Until the statewide on-line reporting system becomes operational, the

Discharger shall report sanitary sewer overflows electronically according to the Regional Water Board's SSO reporting program.

c. Settleable Matter Reduction.

CSD shall submit progress reports at two-year intervals to describe the status of measures designed to reduce inflow and infiltration to CSD's collection system and to improve grit removal performed by CSD prior to conveying wastewater to the JTP. Each progress report shall be submitted to the Executive Officer by June 30 of each other year, with the first report due on June 30, 2008.

9. Compliance Schedule and Compliance with Final Effluent Limits.

The Discharger shall comply with the following:

Task	Deadline
a. Implement source control measures identified in the Discharger's Infeasibility Report to reduce concentrations of mercury, cyanide, and TCDD TEQ to the treatment plant, and therefore to receiving waters. For the once-through cooling water discharge, the Discharger shall investigate the sources of mercury, selenium, and cyanide in the discharge, or investigate whether the analytical results represent the true pollutant concentrations in the discharge, but not due to matrix interference.	Upon the effective date of this Order.
b. The Discharger shall evaluate and report on the effectiveness of its source control measures in reducing concentrations of mercury and cyanide to the plant. If previous measures have not been successful in enabling the Discharger to comply with final limits for mercury, selenium, cyanide, the Discharger shall also identify and implement additional source control measures to further reduce concentrations of these pollutants. If the copper and cyanide SSO becomes effective and an alternate limit takes effect, the Discharger shall implement any applicable additional pollutant minimization measures described in Basin Plan implementation requirements associated with the copper and cyanide SSO.	Annually in the Annual Best Management Practices and Pollutant Minimization Report required by Provision VI.C.3

Task	Deadline
c. In the event that source control measures are insufficient for meeting final water quality based effluent limits specified in Effluent Limitations and Discharge Specifications IV.A.3 and IV.B.3 for mercury, selenium, and cyanide, the Discharger shall submit a schedule for implementation of additional actions to reduce the concentrations of these pollutants.	July 1, 2009
d. The Discharger shall commence implementation of the identified additional actions in accordance with the schedule submitted in task c, above.	August 15, 2009.
e. Full Compliance with IV. Effluent Limitations and Discharger Specifications A.3.a and B.3.a for mercury, selenium, and cyanide**.**	April 28, 2010.
f. Full Compliance with IV. Effluent Limitations and Discharger Specifications A.3.a and B.3.a for dioxin-TEQ. Alternatively, the Discharger may comply with the limit in IV through implementation of a mass offset strategy for dioxin-TEQ in accordance with policies in effect at that time.	June 1, 2017.

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in Section IV of this Order will be determined as specified below:

A. General.

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP (Attachment E of this Order). For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

B. Multiple Sample Data.

When determining compliance with an AMEL or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ), also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL): the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL): the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Bioaccumulative pollutants are those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (*CV*) is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ) are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is

calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effluent Concentration Allowance (ECA) is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration is the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inland Surface Waters are all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation: the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation: the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL) means the highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median is the middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order).

If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

Method Detection Limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML) is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Not Detected (ND) are those sample results less than the laboratory's MDL.

Ocean Waters are the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP) means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Regional Water Board.

Reporting Level (RL) is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Satellite Collection System is the portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

Source of Drinking Water is any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

Standard Deviation (σ) is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:

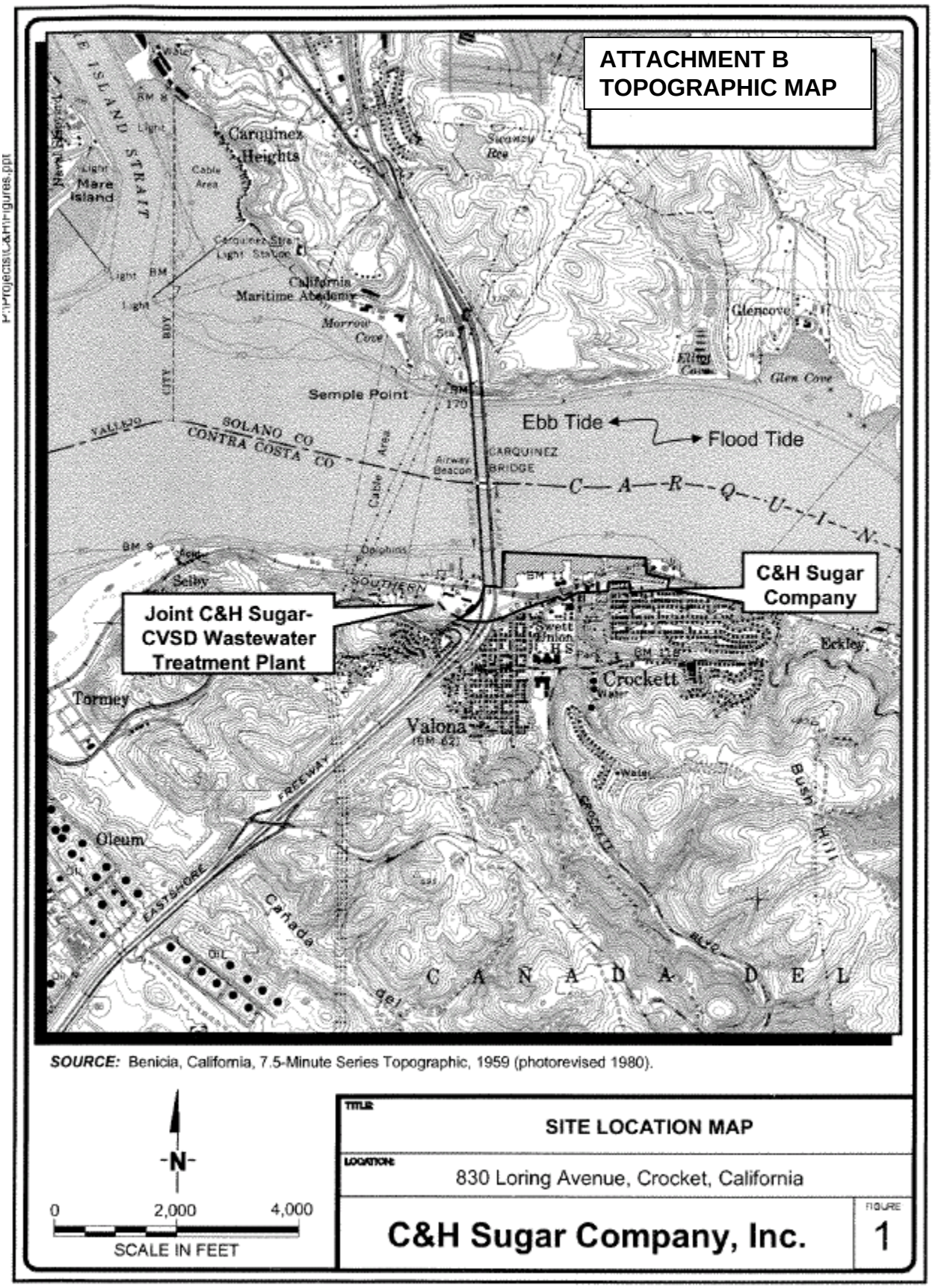
x is the observed value;

μ is the arithmetic mean of the observed values; and

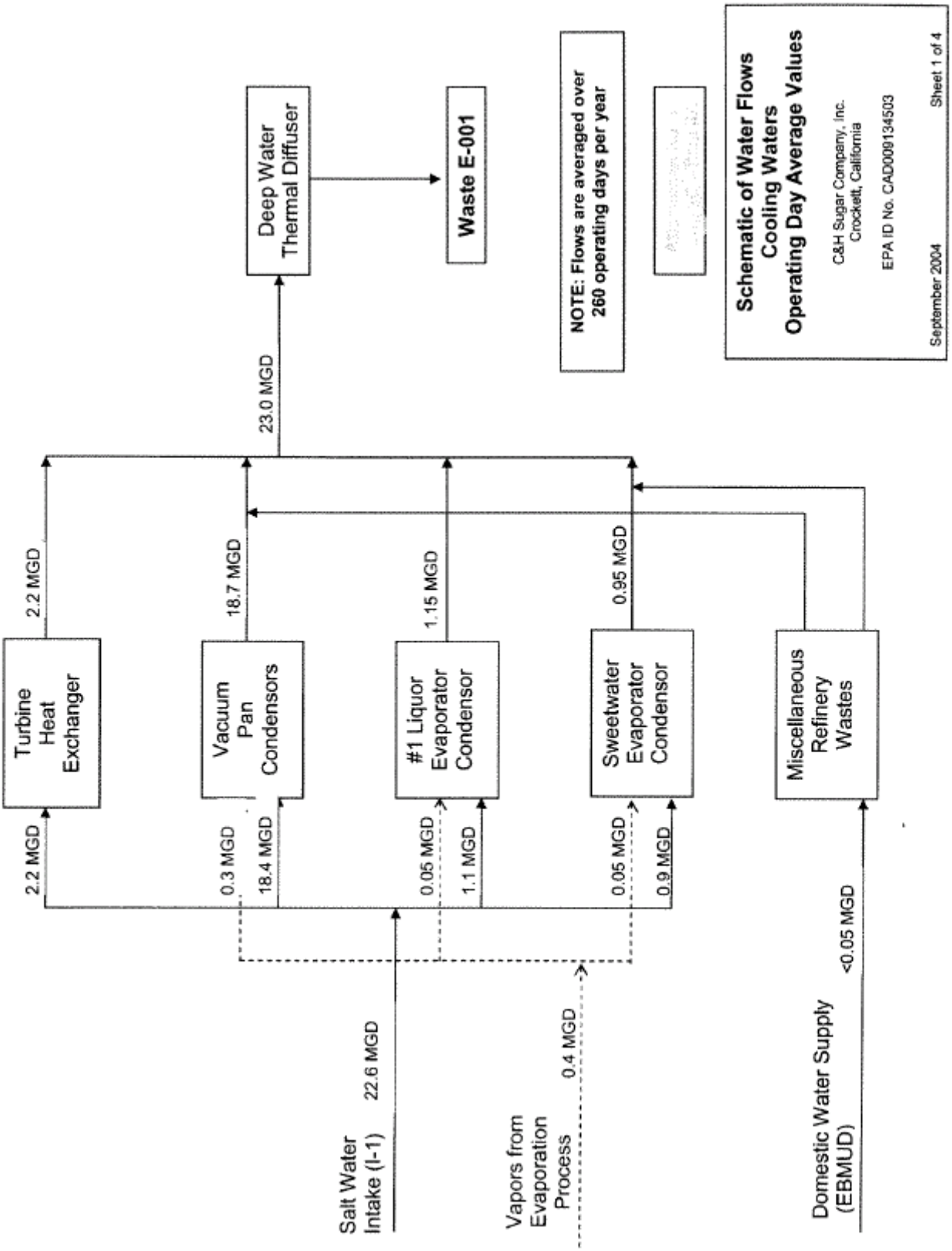
n is the number of samples.

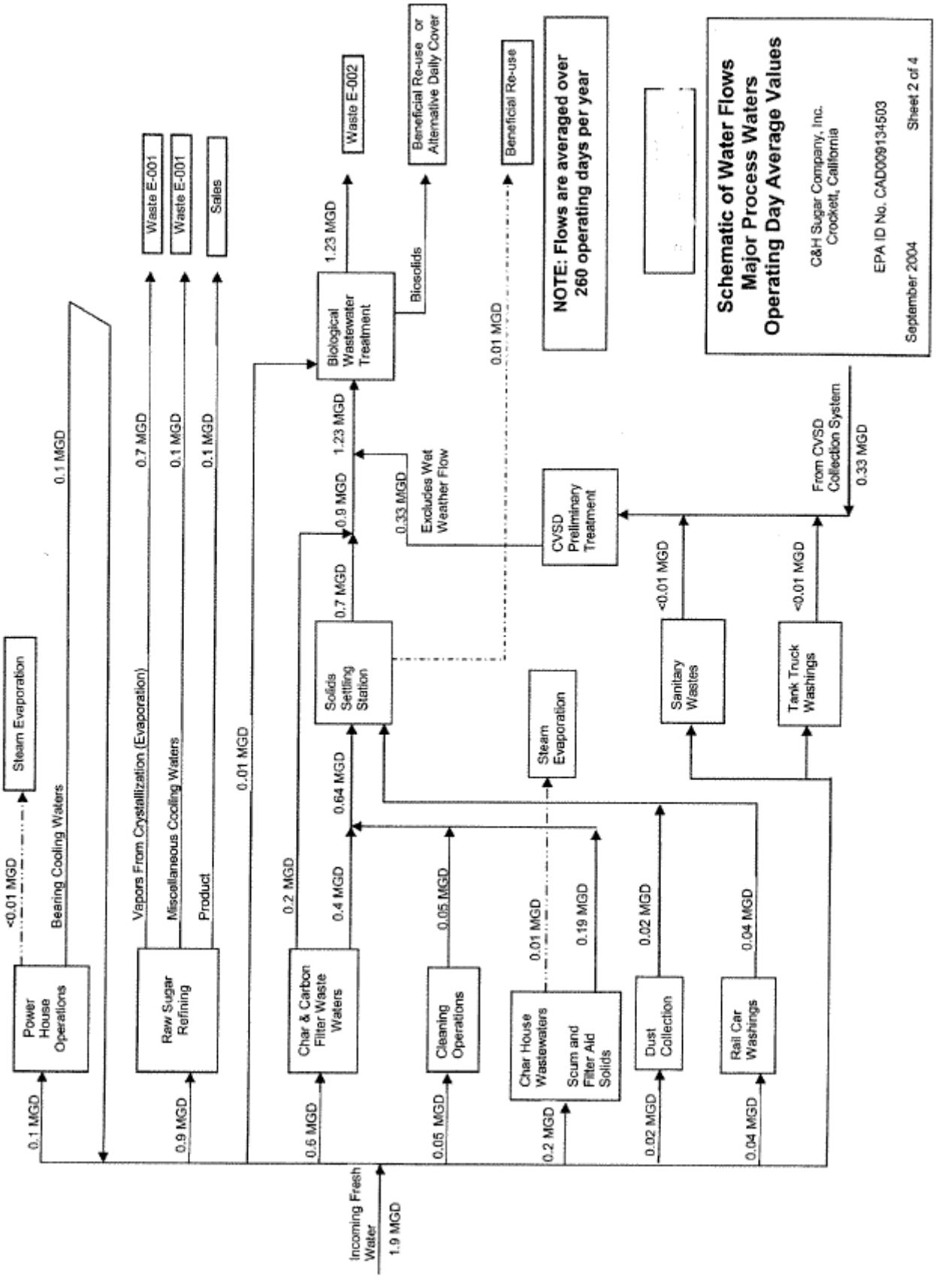
Toxicity Reduction Evaluation (TRE) is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

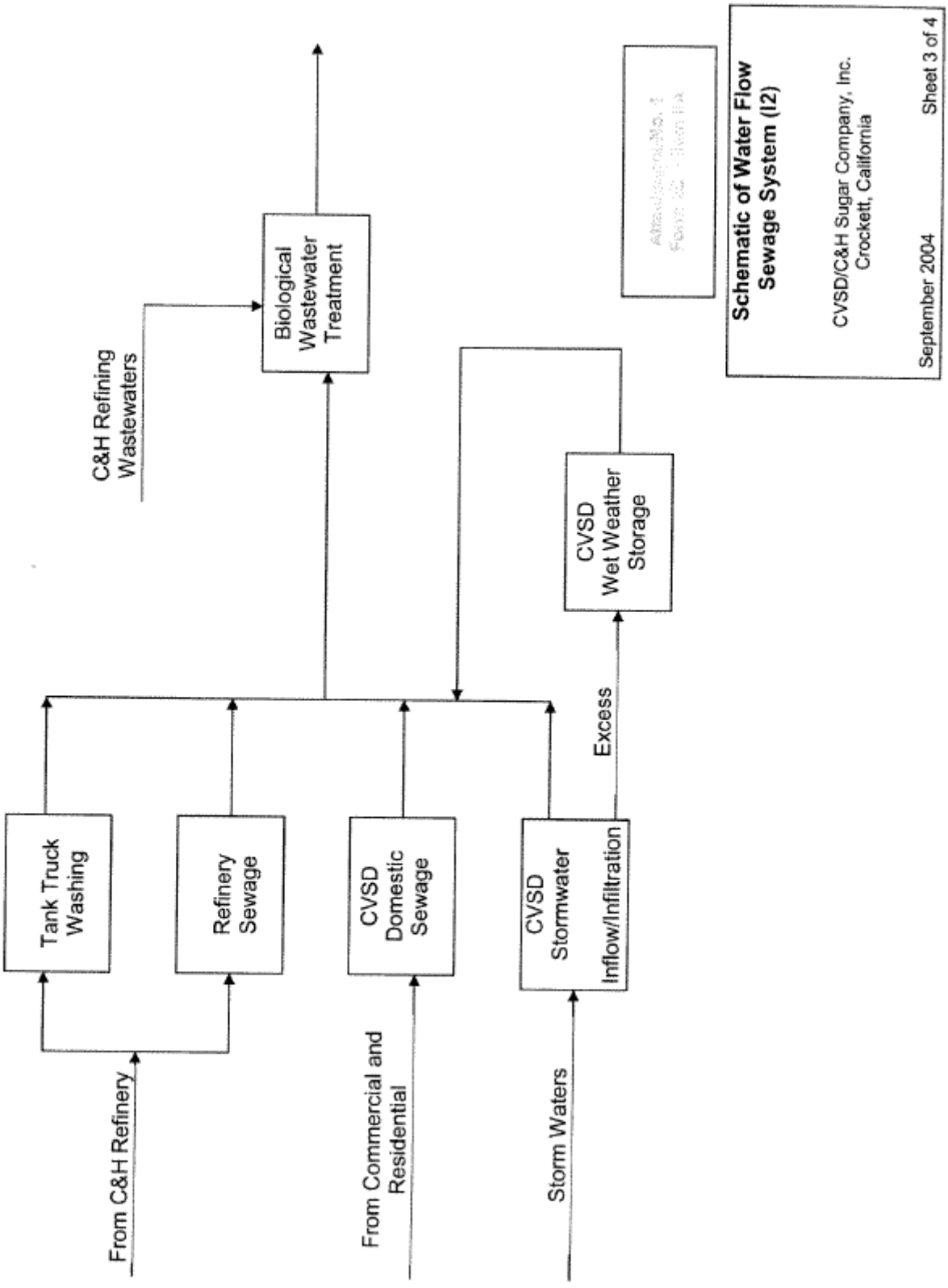
ATTACHMENT B - TOPOGRAPHIC MAP

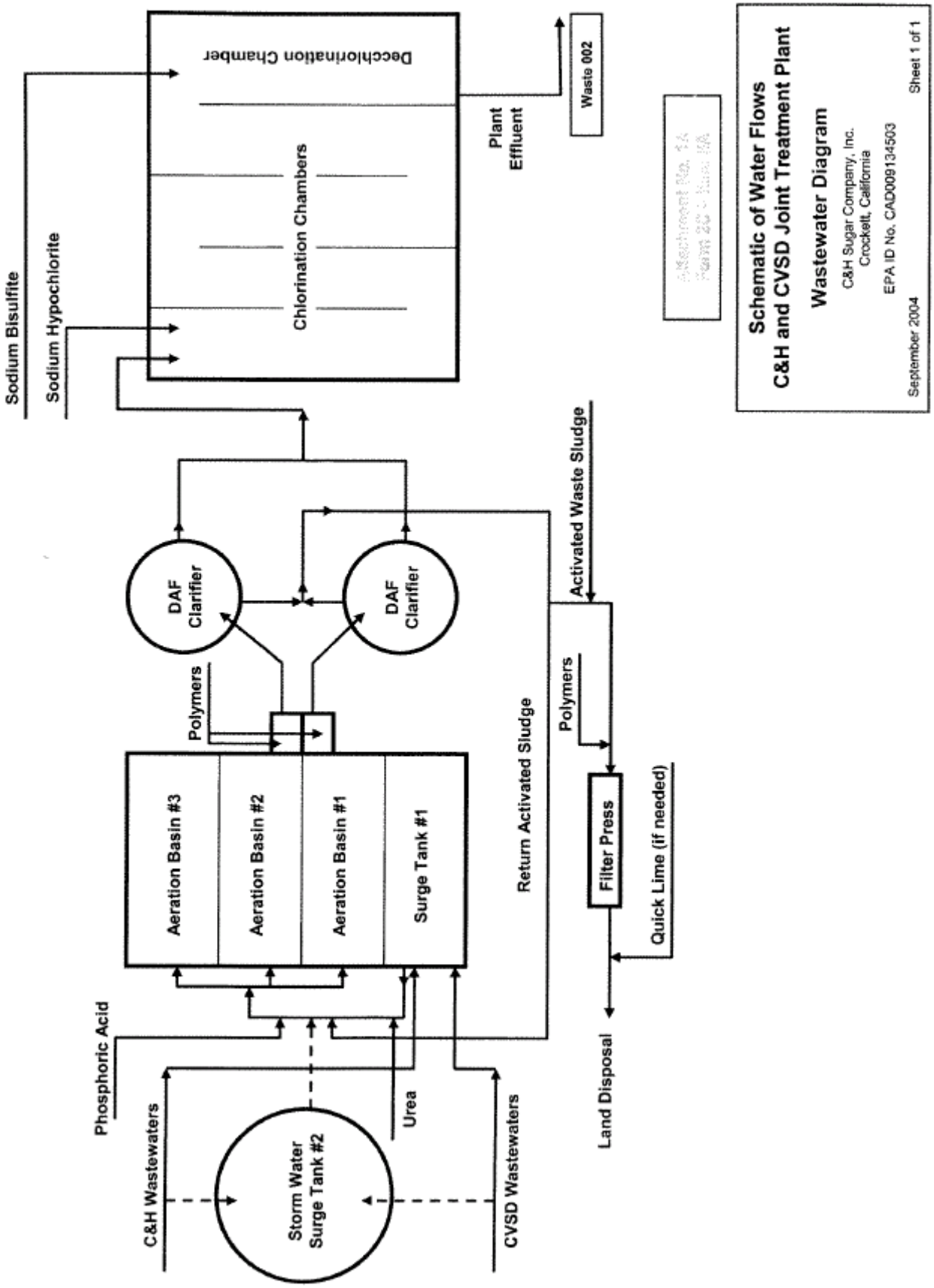


ATTACHMENT C – FLOW SCHEMATIC




Schematic of Water Flows
Major Process Waters
Operating Day Average Values
C&H Sugar Company, Inc.
Crockett, California
EPA ID No. CAD009134503
September 2004
Sheet 2 of 4
NOTE: Flows are averaged over 260 operating days per year
Incoming Fresh Water
1.9 MGD
Power House Operations
Raw Sugar Refining
Char & Carbon Filter Waste Waters
Cleaning Operations
Char House Wastewaters
Scum and Filter Aid Solids
Dust Collection
Rail Car Washings
Solids Settling Station
Steam Evaporation
Sanitary Wastes
Tank Truck Washings
CVSD Preliminary Treatment
From CVSD Collection System
Biological Wastewater Treatment
Biosolids
Beneficial Re-use or Alternative Daily Cover
Beneficial Re-use
Waste E-002
Steam Evaporation
Bearing Cooling Waters
Vapors From Crystallization (Evaporation)
Miscellaneous Cooling Waters
Product
Waste E-001
Waste E-001
Sales
Excludes Wet Weather Flow
0.1 MGD
0.9 MGD
0.6 MGD
0.05 MGD
0.2 MGD
0.02 MGD
0.04 MGD
0.2 MGD
0.4 MGD
0.05 MGD
0.01 MGD
0.19 MGD
0.02 MGD
0.04 MGD
0.64 MGD
0.7 MGD
0.9 MGD
1.23 MGD
0.33 MGD
<0.01 MGD
<0.01 MGD
0.33 MGD
0.01 MGD
1.23 MGD
0.01 MGD
0.7 MGD
0.1 MGD
0.1 MGD
0.7 MGD
<0.01 MGD


Schematic of Water Flow
Sewage System (I2)
CVSD/C&H Sugar Company, Inc.
Crockett, California
September 2004
Sheet 3 of 4
Biological Wastewater Treatment
C&H Refining Wastewaters
CVSD Wet Weather Storage
Excess
Tank Truck Washing
Refinery Sewage
CVSD Domestic Sewage
CVSD Stormwater Inflow/Infiltration
From C&H Refinery
From Commercial and Residential
Storm Waters


Schematic of Water Flows
C&H and CVSD Joint Treatment Plant
Wastewater Diagram
C&H Sugar Company, Inc.
Crockett, California
EPA ID No. CAD009134503
September 2004
Sheet 1 of 1
Sodium Bisulfite
Sodium Hypochlorite
Dechlorination Chamber
Chlorination Chambers
Plant Effluent
Waste 002
DAF Clarifier
DAF Clarifier
Activated Waste Sludge
Polymers
Polymers
Aeration Basin #3
Aeration Basin #2
Aeration Basin #1
Surge Tank #1
Return Activated Sludge
Filter Press
Quick Lime (if needed)
Land Disposal
Phosphoric Acid
Urea
C&H Wastewaters
Storm Water Surge Tank #2
CVSD Wastewaters

ATTACHMENT D – FEDERAL STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or denial of a permit renewal application [*40 CFR §122.41(a)*].

2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not been modified to incorporate the requirement [*40 CFR §122.41(a)(1)*].

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order [*40 CFR §122.41I*].

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment [*40 CFR §122.41(d)*].

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order [*40 CFR §122.41(e)*].

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges [*40 CFR §122.41(g)*].

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations [*40 CFR §122.5I*].

F. Inspection and Entry

The Discharger shall allow the Regional Water Quality Control Board (Regional Water Board), State Water Resources Control Board (SWRCB), United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to [*40 CFR §122.41(i)*] [*CWC 13383I*]:

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order [*40 CFR §122.41(i)(1)*];

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order [*40 CFR §122.41(i)(2)*];

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order [*40 CFR §122.41(i)(3)*];

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location [*40 CFR §122.41(i)(4)*].

G. Bypass

1. Definitions

   a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility [*40 CFR §122.41(m)(1)(i)*].

   b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production [*40 CFR §122.41(m)(1)(ii)*].

2. Bypass not exceeding limitations – The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3 and I.G.5 below [*40 CFR §122.41(m)(2)*].

3. Prohibition of bypass – Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless [*40 CFR §122.41(m)(4)(i)*]:

   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [*40 CFR §122.41(m)(4)(A)*];

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance [*40 CFR §122.41(m)(4)(B)*]; and

c. The Discharger submitted notice to the Regional Water Board as required under Standard Provision – Permit Compliance I.G.5 below [*40 CFR §122.41(m)(4)I*].

4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above [*40 CFR §122.41(m)(4)(ii)*].

5. Notice

a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass [*40 CFR §122.41(m)(3)(i)*].

b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions – Reporting V.E below [*40 CFR §122.41(m)(3)(ii)*].

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation [*40 CFR §122.41(n)(1)*].

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph H.2 of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review [*40 CFR §122.41(n)(2)*].

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that [*40 CFR §122.41(n)(3)*]:

a. An upset occurred and that the Discharger can identify the cause(s) of the upset [*40 CFR §122.41(n)(3)(i)*];

b. The permitted facility was, at the time, being properly operated [*40 CFR §122.41(n)(3)(i)*];

c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b [*40 CFR §122.41(n)(3)(iii)*]; and

d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [*40 CFR §122.41(n)(3)(iv)*].

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof [*40 CFR §122.41(n)(4)*].

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition [*40 CFR §122.41(f)*].

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit [*40 CFR §122.41(b)*].

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC [*40 CFR §122.41(l)(3)*] [*40 CFR §122.61*].

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [*40 CFR §122.41(j)(1)*].

B. Monitoring results must be conducted according to test procedures under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order [*40 CFR §122.41(j)(4)*] [*40 CFR §122.44(i)(1)(iv)*].

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the Discharger

shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time [*40 CFR §122.41(j)(2)*].

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements [*40 CFR §122.41(j)(3)(i)*];

2. The individual(s) who performed the sampling or measurements [*40 CFR §122.41(j)(3)(ii)*];

3. The date(s) analyses were performed [*40 CFR §122.41(j)(3)(iii)*];

4. The individual(s) who performed the analyses [*40 CFR §122.41(j)(3)(iv)*];

5. The analytical techniques or methods used [*40 CFR §122.41(j)(3)(v)*]; and

6. The results of such analyses [*40 CFR §122.41(j)(3)(vi)*].

C. Claims of confidentiality for the following information will be denied [*40 CFR §122.7(b)*]:

1. The name and address of any permit applicant or Discharger [*40 CFR §122.7(b)(1)*]; and

2. Permit applications and attachments, permits and effluent data [*40 CFR §122.7(b)(2)*].

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, SWRCB, or USEPA within a reasonable time, any information which the Regional Water Board, SWRCB, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, SWRCB, or USEPA copies of records required to be kept by this Order [*40 CFR §122.41(h)*] [*CWC 13267*].

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, SWRCB, and/or USEPA shall be signed and certified in accordance with paragraph (2.) and (3.) of this provision [*40 CFR §122.41(k)*].

2. All permit applications shall be signed as follows:

a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures [*40 CFR §122.22(a)(1)*];

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively [*40 CFR §122.22(a)(2)*]; or

c. For a municipality, State, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA) [*40 CFR §122.22(a)(3)*].

3. All reports required by this Order and other information requested by the Regional Water Board, SWRCB, or USEPA shall be signed by a person described in paragraph (b) of this provision, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in paragraph (2.) of this provision [*40 CFR §122.22(b)(1)*];

   b. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company (a duly authorized representative may thus be either a named individual or any individual occupying a named position) [*40 CFR §122.22(b)(2)*]; and

   c. The written authorization is submitted to the Regional Water Board, SWRCB, or USEPA [*40 CFR §122.22(b)(3)*].

4. If an authorization under paragraph (3.) of this provision is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (3.) of this provision must be submitted to the Regional Water Board, SWRCB or USEPA

prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 CFR §122.22l].

5. Any person signing a document under paragraph (2.) or (3.) of this provision shall make the following certification:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations" [*40 CFR §122.22(d)*].

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program in this Order [*40 CFR §122.41(l)(4)*].

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or SWRCB for reporting results of monitoring of sludge use or disposal practices [*40 CFR §122.41(l)(4)(i)*].

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board [*40 CFR §122.41(l)(4)(ii)*].

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order [*40 CFR §122.41(l)(4)(iii)*].

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date [*40 CFR §122.41(l)(5)*].

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates

and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [*40 CFR §122.41(l)(6)(i)*].

2. The following shall be included as information that must be reported within 24 hours under this paragraph [*40 CFR §122.41(l)(6)(ii)*]:

   a. Any unanticipated bypass that exceeds any effluent limitation in this Order [*40 CFR §122.41(l)(6)(ii)(A)*].

   b. Any upset that exceeds any effluent limitation in this Order [*40 CFR §122.41(l)(6)(ii)(B)*].

   c. Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours [*40 CFR §122.41(l)(6)(ii)I*].

3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours [*40 CFR §122.41(l)(6)(iii)*].

F. Planned Changes

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when [*40 CFR §122.41(l)(1)*]:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR §122.29(b) [*40 CFR §122.41(l)(1)(i)*]; or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in this Order nor to notification requirements under 40 CFR Part 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [*40 CFR §122.41(l)(1)(ii)*].

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan [*40 CFR §122.41(l)(1)(iii)*].

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or SWRCB of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements [*40 CFR §122.41(l)(2)].*

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting E.3, E.4, and E.5 at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E [*40 CFR §122.41(l)(7)*].

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, SWRCB, or USEPA, the Discharger shall promptly submit such facts or information [*40 CFR §122.41(l)(8)*].

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Clean Water Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions [*40 CFR §122.41(a)(2)*] [*CWC 13385 and 13387*].

B. Any person may be assessed an administrative penalty by the Regional Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this

Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000 [*40 CFR §122.41(a)(3)*].

C. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both [*40 CFR §122.41(j)(5)*].

D. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both [*40 CFR §122.41(k)(2)*].

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Regional Water Board as soon as they know or have reason to believe [*40 CFR §122.42(a)*]:

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [*40 CFR §122.42(a)(1)*]:

    a. 100 micrograms per liter (µg/L) [*40 CFR §122.42(a)(1)(i)*];

    b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony [*40 CFR §122.42(a)(1)(ii)*];

    c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [*40 CFR §122.42(a)(1)(iii)*]; or

    d. The level established by the Regional Water Board in accordance with 40 CFR §122.44(f) [*40 CFR §122.42(a)(1)(iv)*].

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order,

if that discharge will exceed the highest of the following "notification levels" [*40 CFR §122.42(a)(2)*]:

a. 500 micrograms per liter (µg/L) [*40 CFR §122.42(a)(2)(i)*];

b. 1 milligram per liter (mg/L) for antimony [*40 CFR §122.42(a)(2)(ii)*];

c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [*40 CFR §122.42(a)(2)(iii)*]; or

d. The level established by the Regional Water Board in accordance with 40 CFR §122.44(f) [*40 CFR §122.42(a)(2)(iv)*].

B. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following [*40 CFR §122.42(b)*]:

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to Sections 301 or 306 of the CWA if it were directly discharging those pollutants [*40 CFR §122.42(b)(1)*]; and

2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order [*40 CFR §122.42(b)(2)*].

3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW [*40 CFR §122.42(b)(3)*].

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Table of Contents

List of Tables

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (CFR) at 40 CFR §122.48 requires that all NPDES permits specify monitoring and reporting requirements. CWC sections 13267 and 13383 also authorize the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements which implement the Federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. The Discharger shall comply with the MRP for this Order as adopted by the Regional Water Board, and with all of the requirements contained in Self-Monitoring Program, Part A, adopted August 1993 (SMP, **Attachment G**). If any discrepancies exist between the MRP and SMP, the MRP prevails.

B. Sampling is required during the entire year when discharging. All analyses shall be conducted using current USEPA methods, or that have been approved by the USEPA Regional Administrator pursuant to 40 CFR 136.4 and 40 CFR 136.5, or equivalent methods that are commercially and reasonably available, and that provide quantification of sampling parameters and constituents sufficient to evaluate compliance with applicable effluent limits and to perform reasonable potential analysis. Equivalent methods must be more sensitive than those specified in 40 CFR 136, must be specified in the permit, and must be approved for use by the Executive Officer, following consultation with the State Water Resources Control Board's Quality Assurance Program.

C. Sampling and analysis of additional constituents is required pursuant to Table 1 of the Regional Water Board's August 6, 2001 Letter titled Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy (**Attachment G**).

D. **Minimum Levels**. For compliance and reasonable potential monitoring, analyses shall be conducted using the commercially available and reasonably achievable detection levels that are lower than the WQOs/WQC or the effluent limitations, whichever is lower. The objective is to provide quantification of constituents sufficient to allow evaluation of observed concentrations with respect to the Minimum Levels given below. All Minimum Levels are expressed as µg/L approximately equal to parts per billion (ppb).

Table E-1. Test Methods and Minimum Levels for Pollutants with Effluent Limits

CTR #	Constituent	Types of Analytical Methods [a] Minimum Levels (μg/L)											
		GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD-RIDE	CVAA	DCP
2	Arsenic						2.0		2.0	2.0	1.0		
6	Copper								0.5	2			
7	Lead								0.5	2			
8	Mercury [b]								0.0005			0.0002	
9	Nickel						5.0		1.0	5.0			
10	Selenium								2.0		1.0		
13	Zinc								1.0	10			
14	Cyanide				5								
	Dioxin-TEQ [c]												
68	Bis(2-ethylhexyl)phthalate		5.0										

[a] Analytical Methods / Laboratory techniques are defined as follows:
GC - Gas Chromatography
GCMS - Gas Chromatography/Mass Spectrometry
HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)
LC - High Pressure Liquid Chromatography
FAA - Flame Atomic Absorption
GFAA - Graphite Furnace Atomic Absorption
HYDRIDE - Gaseous Hydride Atomic Absorption
CVAA - Cold Vapor Atomic Absorption
ICP - Inductively Coupled Plasma
ICPMS - Inductively Coupled Plasma/Mass Spectrometry
SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)
DCP - Direct Current Plasma
COLOR – Colorimetric

[b] Use ultra-clean sampling (USEPA 1669) to the maximum extent practicable, and ultra-clean analytical methods (USEPA 1631) for mercury monitoring.

[c] The minimum levels for 2,3,7,8-TCDD and all other 16 congeners using U.S. EPA 1613 range from 5 – 50 pg/L. These MLs were developed in collaboration with BACWA as levels that were achievable by BACWA participants (BACWA letter dated April 23, 2003).

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order.

Table E-2. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
Influent and Intake Water	M-INF-001 (I-1)	At any point in the bay water intake system that delivers water from Carquinez Strait to the Refinery, prior to any treatment or used for cooling or processing.
	M-INF-002 (I-2)	At any point in the wastewater conveyance system from CSD to the JTP where flow measurements are representative of the flow rates of wastewater delivered by CSD.
	M-INF-003 (P-1)	At any point in the wastewater treatment system beyond the primary waste treatment plant at the Refinery and before the surge tank at the JTP.
Effluent	M-001	At any point leading to Discharge Point 001 between the point of discharge and the point where all wastes tributary thereto are present such that the sample is representative of the effluent.
	M-002	At any point leading to Discharge Point 002 between the point of discharge and a point at which all wastes tributary to the point of discharge are present.
	M-002-D	At a point in the disinfection facilities at which adequate contact with the disinfectant has been achieved.
Storm Waters	M-003	At any point in the outfall for Waste 003 between the point of discharge and the point at which all waste tributary to that discharge is present.
	M-005	At any point in the outfall for Waste 005 between the point of discharge and the point at which all storm water tributary to that discharge is present.
	M-008	At any point in the outfall for Waste 008 between the point of discharge and the point at which all storm water tributary to that discharge is present.
	M-009	At any point in the outfall for Waste 009 between the point of discharge and the point at which all storm water tributary to that discharge is present.
	M-011	At any point in the outfall for Waste 011 between the point of discharge and the point at which all storm water tributary to that discharge is present.
	M-012	At any point in the outfall for Waste 012 between the point of discharge and the point at which all storm water tributary to that discharge is present.
	M-013	At any point in the outfall for Waste 013 between the point of discharge and the point at which all waste tributary to that discharge is present.
	M-014	At any point in the outfall for Waste 014 between the point of discharge and the point at which all storm water tributary to that discharge is present.
	M-016	At any point in the outfall for Waste 016 between the point of discharge and the point at which all storm water tributary to that discharge is present.
Receiving Waters	R-001 (C-1)	At a point in Carquinez Strait, located in the boil caused by effluent from Discharge Point 001.
	R-002 (C-2)	At a point in Carquinez Strait, located in the vicinity of the diffusers for Discharge Point 002.
	R-003 (C-RE)	At a point in Carquinez Strait, located at the edge of the wharf at its easterly end.
	R-004 (C-RW)	At a point in Carquinez Strait, located at the edge of the wharf at its westerly end.

III. INFLUENT / INTAKE WATER MONITORING REQUIREMENTS

(Monitoring Location M-INF-001, M-INF-002, and M-INF-003)

The Discharger shall monitor influent / intake water as follows:

Table E-3. Influent/Intake Water Monitoring

Parameter	Monitoring Location	Units[1]	Sample Type	Minimum Sampling Frequency	Analytical Method
Flow [2]	M-INF-001 M-INF-002	MGD/MG	Continuous	Daily	meter
COD [3]	M-INF-003	mg/L and lbs/day	24-hour composite (C-24)	Daily	---

[1] Unit Abbreviations
MGD = million gallons per day
MG = million gallons
mg/L = milligrams per liter
lbs/day = pounds per day

[2] Flows shall be monitored continuously and the following shall be reported in monthly self-monitoring reports:
a. Daily average flow rate (MGD).
b. Daily total flow volume (MG).
c. Monthly average flow rate (MGD).
d. Monthly total flow volume (MG).
e. Average daily maximum and average daily minimum flow rates (MGD) in a month.
f. Intake duration for M-INF-001: in days and hours.

[3] Chemical oxygen demand (COD) monitoring shall be performed daily on wastewater influent to the surge tank. The Discharger may report in-house COD data instead of using a State-certified laboratory or USEPA approved method, as these data are not used for compliance monitoring.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location M-001

The Discharger shall monitor effluent at Monitoring Location M-001 as follows:

Table E-4. Effluent Monitoring (M-001)

Parameter	Units[1]	Sample Type [2]	Minimum Sampling Frequency	Required Analytical Test Methods [3]
Flow[4]	MGD/MG	Continuous	daily	
BOD_5	mg/L and lb/day	C-24	1/week	
pH[5]	Std Units	Grab	5/week	
Temperature	°C	Continuous	5/week	
Conductivity	µmhos/cm	C-24	1/month	
Arsenic	µg/L	C-24	1/month	
Copper	µg/L	C-24	1/ month	
Lead	µg/L	C-24	1/month	

Parameter	Units[1]	Sample Type [2]	Minimum Sampling Frequency	Required Analytical Test Methods [3]
Mercury [6]	µg/L	C-24/Grab	1/month	
Nickel	µg/L	C-24	1/month	
Selenium	µg/L	C-24	1/month	
Zinc	µg/L	C-24	1/month	
Cyanide [7]	µg/L	Grab	1/month	
Dioxin-TEQ [8]	µg/L	Grab	2/year	
Bis (2-ethylhexyl) phthalate	µg/L	C-24	2/year	
All other priority inorganic pollutants [9]	µg/L	[11]	2/year	
All other priority organic pollutants [10]	µg/L	[11]	1/year	
All Applicable Standard Observations	---	Visual observation	1/week	

[1] Unit Abbreviations
MGD = million gallons per day
MG = million gallons
°C = degrees Celsius
mg/L = milligrams per liter

[2] Sample Type Abbreviations
Continuous = measured continuously, and recorded and reported daily
C-24 = 24-hour composite

[3] The Discharger has the option of substituting another method for those listed in this table, but only if that method has a level of quantification below the applicable criterion or below the lowest ML listed in Appendix 4 of the SIP. This alternate method must also be USEPA approved.

[4] Flow Monitoring.
Flows shall be monitored continuously and the following shall be reported in monthly self-monitoring reports:
a. Daily average flow rate (MGD).
b. Daily total flow volume (MG).
c. Monthly average flow rate (MGD).
d. Monthly total flow volume (MG).
e. Average daily maximum and average daily minimum flow rates (MGD) in a month.
f. Discharge duration, in days and hours.

[5] pH. The Discharger may use continuous monitoring for pH. If pH is monitored continuously; the minimum and maximum pH values for each day shall be reported in monthly self-monitoring reports.

[6] Mercury. The Discharger shall use ultra-clean sampling methods (USEPA 1669) to the maximum extent practicable, and ultra-clean analytical methods (USEPA 1631) for mercury monitoring. The Discharger may use alternative methods of analysis (such as USEPA 245), if that alternate method has a method detection limit (MDL)of 2 ng/L (0.0002 µg/L) or less.

[7] Cyanide. Compliance may be demonstrated by measurement of weak acid dissociable cyanide.

[8] Dioxin-TEQ. Chlorinated Dibenzodioxins and Chlorinated Dibenzofurans shall be analyzed using the latest version of USEPA Method 1613; the analysis shall be capable of achieving one half the USEPA method 1613 Minimum Levels. Alternative methods of analysis must be approved by the Executive Officer. In addition to reporting results for each of the 17 congeners, the Dioxin-TEQ shall be calculated and reported using 1998 USEPA Toxicity Equivalent Factors for dioxin and furan congeners.

[9] Priority inorganic pollutants are those pollutants identified as Compound Nos. 1 – 15 by the California Toxics Rule at 40 CFR 131.38.

[10] Priority organic pollutants are those pollutants identified as Compound Nos. 16 – 126 by the California Toxics Rule at 40 CFR 131.38.

[11] The sample type and analytical method should be as described in the August 6, 2001 letter.

B. Monitoring Location M-002 (M-002D)

The Discharger shall monitor effluent at Monitoring Location M-002 (M-002-D) as follows:

Table E-5. Effluent Monitoring (M-002 or M-002-D)

Parameter	Units[1]	Sample Type[2]	Min. Sampling Frequency	Required Analytical Test Methods[3]
Flow[4]	MGD	Continuous	---	
BOD_5[5]	mg/L and lbs/day	C-24	1/week	
TSS[5]	mg/L and lbs/day	C-24	1/week	
Settleable Matter[6]	mL/L/hr	Grab	1/2 weeks	
Oil and Grease[7]	mg/L	Grab	1/week	
pH[8]	Standard Units	Grab	1/day	
Dissolved Oxygen	mg/L	Grab	1/month	
Sulfides (total and dissolved, when DO<5 mg/L)	mg/L	Grab	1/ month	
Hydrogen Peroxide Dosage[9]	mg/L and lbs/day	---	---	
Total Residual Chlorine[10]	mg/L	Continuous	Continuous/H	
Total Coliform Bacteria[11]	MPN/100 mL	Grab	3/week	
Temperature	ºC	Continuous	Continuous	
Copper	µg/L	C-24	1/month	
Lead	µg/L	C-24	1/month	
Mercury [12]	µg/L	C-24/ grab	1/ month	
Cyanide [13]	µg/L	Grab	1/month	
Dioxin-TEQ [14]	µg/L	Grab	2/year	
Bis (2-ethylhexyl) phthalate	µg/L	C-24	2/year	
Chronic Toxicity [15]	TUc	C-24	[16]	
Acute Toxicity[17]	% survival	Continuous	1/2 weeks	
All other priority inorganic pollutants [18]	µg/L	[20]	2/year	
All other priority organic pollutants [19]	µg/L	[20]	1/year	
All Applicable Standard Observations	---	Visual observation	5/week	

[1] Unit Abbreviations

MGD	=	million gallons per day
°C	=	degrees Celsius
mg/L	=	milligrams per liter
µg/L	=	micrograms per liter
MPN/100 mL	=	most probable number per 100 milliliters
kg/d	=	kilograms per day
mls/L/hr	=	milliliters per liter per hour

[2] Sample Type Abbreviations

Continuous	=	measured continuously, and recorded and reported daily
C-24	=	24-hour composite

[3] The Discharger has the option of substituting another method for those listed in this table, but only if that method has a level of quantification below the applicable criterion or below the lowest ML listed in Appendix 4 of the SIP. This alternate method must also be USEPA approved.

[4] Flow Monitoring.
Flows shall be monitored continuously and the following shall be reported in monthly self-monitoring reports:
a. Daily average flow rate (MGD).
b. Daily total flow volume (MG).
c. Monthly average flow rate (MGD).
d. Monthly total flow volume (MG).
e. Average daily maximum and average daily minimum flow rates (MGD) in a month.

[5] BOD and TSS. Sampling of BOD_5 and TSS is required once every week when there is Refinery process wastewater discharging into the JTP..

[6] Settable Matter. Monitoring is required when there is process wastewater discharging into the JTP.

[7] Oil & Grease Monitoring: Monitoring of oil and grease is required once every two weeks when there is process wastewater discharging into the JTP.. Each Oil & Grease sample event shall consist of a composite sample comprised of three grab samples taken at equal intervals during the plant operating hours of the sampling date, with each grab sample being collected in a glass container. Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent rinsing as soon as possible after use, and the solvent rinsing shall be added to the composite sample for extraction and analysis.

[8] pH. The Discharger may use continuous monitoring for pH. If pH is monitored continuously; the minimum and maximum pH values for each day shall be reported in monthly self-monitoring reports.

[9] Hydrogen Peroxide. Hydrogen peroxide dosage shall be reported in mg/L and lbs/day on every occurrence when it is manually added to the surge tank as a result of organic overload. For each occurrence lasting more than one calendar day, the daily dosage (lbs) of hydrogen peroxide shall be reported in that months self monitoring report.

[10] Chlorine residual. The Discharger may record discrete readings from the continuous monitoring every hour on the hour, and report, on a daily basis, the maximum concentration observed following dechlorination. Total chlorine dosage (kg/day) shall be recorded on a daily basis.

[11] The total coliform bacteria sampling location used for monitoring compliance with the coliform limit is M-002-D.

[12] Mercury, The Discharger shall use ultra-clean sampling methods (USEPA 1669) to the maximum extent practicable, and ultra-clean analytical methods (USEPA 1631) for mercury monitoring. The Discharger may use alternative methods of analysis (such as USEPA 245), if that alternate method has a method detection limit (MDL) of 2 ng/L (0.002 µg/L) or less.

[13] Cyanide. Compliance may be demonstrated by measurement of weak acid dissociable cyanide.

[14] Dioxin-TEQ. Chlorinated Dibenzodioxins and Chlorinated Dibenzofurans shall be analyzed using the latest version of USEPA Method 1613; the analysis shall be capable of achieving one half the USEPA method 1613 Minimum Levels. Alternative methods of analysis must be approved by the Executive Officer. In addition to reporting results for each of the 17 congeners, the Dioxin-TEQ shall be calculated and reported using 1998 USEPA Toxicity Equivalent Factors for dioxin and furan congeners.

[15] Chronic Toxicity Monitoring. Test shall be performed and reported in accordance with the Chronic Toxicity Requirements specified in Sections V.B of this MRP.

[16] Chronic Toxicity Monitoring Frequency. The Discharger shall perform a screening phase study to identify a most sensitive species. If no chronic toxicity is observed in the screening phase study, the Discharger is no longer required to perform routine monitoring during the permit term. If chronic toxicity is observed during the screening phase study, in addition to accelerated monitoring on a monthly basis, the routine monitoring frequency shall be once per year.

[17] Acute Toxicity Bioassay. Monitoring of the bioassay water shall include, on a daily basis during the test, the parameters specified in the U.S. EPA-approved method, such as pH, dissolved oxygen, ammonia nitrogen, conductivity, and temperature. These results shall be reported. If the fish survival rate in the effluent is less than 70 percent or if the control fish survival rate is less than 90 percent, the bioassay test shall be restarted with new batches of fish and shall continue back to back until compliance is demonstrated.

[18] Priority inorganic pollutants are those pollutants identified as Compound Nos. 1 – 15 by the California Toxics Rule at 40 CFR 131.38.

[19] Priority organic pollutants are those pollutants identified as Compound Nos. 16 – 126 by the California Toxics Rule at 40 CFR 131.38.

[20] The sample type and analytical method should be as described in the August 6, 2001 letter.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Whole Effluent Acute Toxicity

Compliance with whole acute toxicity requirements of this Order shall be achieved in accordance with the following:

1. Acute toxicity of effluent limits shall be evaluated by measuring survival of test organisms exposed to 96-hour flow through bioassays.

2. One of the following test species must be used: fathead minnow (*Pimephales promelas*) or rainbow trout (*Oncorhynchus mykiss*).

3. All bioassays shall be performed according to 40 CFR 136, currently the “Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and

Marine Organisms," 5th Edition. Exceptions may be granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP.)

4. If specific identifiable substances in the discharge can be demonstrated by the Discharger as being rapidly rendered harmless upon discharge to the receiving water, compliance with the acute toxicity limit may be determined after the test samples are adjusted to remove the influence of those substances. Written approval from the Executive Officer must be obtained to authorize such an adjustment.

5. Effluent used for fish bioassays must be dechlorinated prior to testing. Monitoring of the bioassay water shall include, on a daily basis, the following parameters: pH, dissolved oxygen, ammonia (if toxicity is observed), temperature, hardness, and alkalinity. These results shall be reported. If the fish survival rate in the effluent is less than 70 percent or if the control fish survival rate is less than 90 percent, the bioassay test shall be restarted with new batches of fish and shall continue back to back until compliance is demonstrated.

B. Whole Effluent Chronic Toxicity

1. Chronic Toxicity Monitoring Requirements

a. **Screening Phase Study.** The Discharger shall submit a screening phase study plan according to **Attachment E-1** of the MRP to the Executive Officer within 120 days from the permit effective date. The Discharger shall initiate the study within 30 days of Executive Officer approval or the Discharger may proceed with the study if the Executive Officer has not commented on the plan after 45 days, and complete the screening phase study within one year from permit effective date.

b. **Sample Collection.** The Discharger shall collect 24-hour composite samples of the treatment facility's effluent at the compliance point specified in Table E-5 of this MRP, for critical life stage toxicity testing as indicated below. For toxicity tests requiring renewals, 24-hour composite samples collected on consecutive days are required.

c. **Routine Monitoring.** Chronic toxicity shall be monitored by using critical life stage test(s) and the most sensitive test species identified by the screening phase testing. The Discharger shall conduct routine monitoring with the species approved by the Executive Officer.

If the Discharger uses two or more species, after at least twelve test rounds, the Discharger may request the Executive Officer to decrease the required frequency of testing, and/or to reduce the number of compliance species to one. Such a request may be made only if toxicity exceeding the TUc values specified in the effluent limitations was never observed using that test species.

d. **Conditions for Accelerated Monitoring.** The Discharger shall accelerate the frequency of monitoring to monthly, or as otherwise specified by the Executive Officer, after exceeding a single sample maximum of 10 TUc.

e. **Methodology.** Sample collection, handling and preservation shall be in accordance with USEPA protocols. The test methodology used shall be in accordance with the references cited in the Permit, or as approved by the Executive Officer. A concurrent reference toxicant test shall be performed for each test.

f. **Dilution Series.** The Discharger shall conduct tests at 100%, 50%, 25%, 10%, and 5%, and 2.5%. The "%" represents percent effluent as discharged.

2. Chronic Toxicity Reporting Requirements

a. **Routine Reporting.** Toxicity test results for the current reporting period shall include the following, at a minimum, for each test.

(1) Sample date(s)

(2) Test initiation date

(3) Test species

(4) End point values for each dilution (e.g., number of young, growth rate, percent survival)

(5) NOEC value(s) in percent effluent

(6) IC15, IC25, IC40, and IC50 values (or EC15, EC25 ... etc.) in percent effluent

(7) TUc values (100/NOEC, 100/IC25, and 100/EC25)

(8) Mean percent mortality (+ s.d.) after 96 hours in 100% effluent

(9) NOEC and LOEC values for reference toxicant test(s)

(10) IC50 or EC50 value(s) for reference toxicant test(s)

(11) Available water quality measurements for each test (i.e., pH, D.O., temperature, conductivity, hardness, salinity, ammonia)

b. **Compliance Summary.** The results of the chronic toxicity testing shall be provided in the most recent self monitoring report and shall include a summary table of chronic toxicity data from at least three of the most recent samples. The information in the table shall include the items listed under V.B.2.a above.

3. Chronic Toxicity Reduction Evaluation (TRE)

a. **Generic TRE Work Plan.** To be prepared for responding to toxicity events, the Discharger shall prepare a generic TRE work plan within 90 days of the effective date of this Order. The Discharger shall review and update the work plan as necessary to remain current and applicable to the discharge and discharge facilities.

b. **Specific TRE Work Plan.** Within 30 days of exceeding either trigger for accelerated monitoring, the Discharge shall submit to the Regional Water Board a TRE work plan, which should be the generic work plan revised as appropriate for this toxicity event after consideration of available discharge data.

c. **Initiate TRE.** Within 30 days of the date of completion of the accelerated monitoring tests observed to exceed the trigger, the Discharger shall initiate a TRE in accordance with a TRE work plan that incorporates any and all comments from the Executive Officer.

d. The TRE shall be specific to the discharge and be in accordance with current technical guidance and reference materials, including USEPA guidance materials. The TRE shall be conducted as a tiered evaluation process, such as summarized below:

   i. Tier 1 consists of basic data collection (routine and accelerated monitoring).
   ii. Tier 2 consists of evaluation of optimization of the treatment process, including operation practices and in-plant process chemicals.
   iii. Tier 3 consists of a toxicity identification evaluation (TIE).
   iv. Tier 4 consists of evaluation of options for additional effluent treatment processes.
   v. Tier 5 consists of evaluation of options for modifications of in-plant treatment processes.
   vi. Tier 6 consists of implementation of selected toxicity control measures, and follow-up monitoring and confirmation of implementation success.

e. The TRE may be ended at any stage if monitoring finds there is no longer consistent toxicity (complying with Effluent Limitations Section IV.6.a).

f. The objective of the TIE shall be to identify the substance or combination of substances causing the observed toxicity. All reasonable efforts using currently available TIE methodologies shall be employed.

g. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the source(s) and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with chronic toxicity evaluation parameters.

h. Many recommended TRE elements parallel required or recommended efforts of source control, pollution prevention and storm water control programs. TRE efforts should be coordinated with such efforts. To prevent duplication of efforts, evidence of complying with requirements or recommended efforts of such programs may be acceptable to comply with TRE requirements.

i. The Regional Water Board recognizes that chronic toxicity may be episodic and identification of causes of and reduction of sources of chronic toxicity may not be

successful in all cases. Consideration of enforcement action by the Regional Water Board will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

Not applicable.

VII. RECLAMATION MONITORING REQUIREMENTS

Not applicable.

VIII. STORM WATER MONITORING REQUIREMENTS

The Discharger shall monitor storm water at Monitoring Locations M-003 through M-016 as follows.

Table E-6. Storm Water Monitoring (M-003 through M-016)

Sampling Stations	E-003, E-005, E-008, E-009, E-011, E-013, E-014, and E-016
Type of Samples [1]	Grab
Flow Rate (MGD) [2]	2/year
pH (Standard unit)	2/year
Total suspended solids (mg/L)	2/year
Total organic carbon (mg/L)	2/year
Conductivity (mhos/cm)	2/year
All applicable standard observations [3]	1/month

[1] Storm water discharges shall be sampled during the first 30 minutes of the first daylight storm event which occurs during scheduled operating periods and which is preceded by at least 3 days of dry weather. If sampling during the first 30 minutes if impractical, samples can be taken during the first one hour of discharge, and the discharger shall explain in the monitoring report why the grab sample(s) could not be taken in the first 30 minutes.

A storm event is defined as a continuous or semi-continuous period of rainfall which produces significant storm water discharge. Significant storm water discharge is a continuous discharge of storm water for approximately one hour or more.

The Discharger may apply to the Executive Officer for reduced number of storm water monitoring locations if the discharger can establish and document that storm water discharges from different locations are substantially identical.

[2] Measure or estimate the total volume of storm water discharge from each station for the storm event sampled. Estimates shall be determined from the amount of rainfall and the area of drainage multiplied by a drainage factor satisfactory to the Executive Officer. The areas and drainage factors shall be proposed by the Discharger in the SWPPP.

[3] See Part A Section C.3.a. Also, storm water observations during the dry period (May 1 through September 30) may be reduced to twice during this five month period.

IX. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Surface Water Monitoring.

1. The Discharger shall continue to participate in the Regional Monitoring Program, which involves collection of data on pollutants and toxicity in water, sediment and biota of the Estuary. The Discharger's participation and support of the RMP is used in consideration of the level of receiving water monitoring (including sediment) required by this Order.

2. With each annual self-monitoring report, the Discharger shall document how it complies with Receiving Water Limitations V.A. This may include using discharge characteristics (e.g., mass balance with effluent data and closest RMP station), receiving water data, or a combination of both.

B. Ground Water Monitoring.

Not applicable.

X. LEGENDS FOR TABLES

Sampling Frequency		Legend
1/day	=	Daily
5/week	=	Five days per week
2/week	=	Two days per week
3/week	=	Three days per week
1/week	=	One day per week
1/2 weeks	=	Once every two weeks
1/month	=	Once per month
1/quarter	=	Once per quarter
1/5 years	=	Once every five years
2/year	=	Two times per year
1/year	=	Once every year

XI. MODIFICATIONS TO PART A OF SELF-MONITORING PROGRAM (ATTACHMENT G)

The following modifications to Part A of the Self-Monitoring Program (**Attachment G**) supersede the requirements of Part A of the Self-Monitoring Program.
Add to the end of Section C.5 as follows:

5. Bottom Sediment Samples and Sampling and Reporting Guidelines

   b. Sediment sampling and reporting requirement is satisfied through participation in the Regional Monitoring Program.

Modify Section F.4 as follows:

Self-Monitoring Reports

[Add the following to the beginning of the first paragraph]

For each calendar month, a self-monitoring report (SMR) shall be submitted to the Regional Water Board in accordance with the requirements listed in Self-Monitoring Program, Part A. The purpose of the report is to document treatment performance, effluent quality and compliance with waste discharge requirements prescribed by this Order, as demonstrated by the monitoring program data and the Discharger's operation practices.

[And add at the end of Section F.4 the following:]

g. If the Discharger wishes to invalidate any measurement, the letter of transmittal will include a formal request to invalidate the measurement; the original measurement in question, the reason for invalidating the measurement, all relevant documentation that supports the invalidation (e.g., laboratory sheet, log entry, test results, etc.), and discussion of the corrective actions taken or planned (with a time schedule for completion), to prevent recurrence of the sampling or measurement problem. The invalidation of a measurement requires the approval of Water Board staff and will be based solely on the documentation submitted at that time.

h. Reporting Data in Electronic Format

The Discharger has the option to submit all monitoring results in an electronic reporting format approved by the Executive Officer. If the Discharger chooses to submit SMRs electronically, the following shall apply:

1) Reporting Method: The Discharger shall submit SMRs electronically via the process approved by the Executive Officer in a letter dated December 17, 1999, Official Implementation of Electronic Reporting System (ERS) and in the Progress Report letter dated December 17, 2000, or in a subsequently approved format that the Permit has been modified to include.

2) Monthly or Quarterly Reporting Requirements: For each reporting period (monthly or quarterly as specified in this MRP), an electronic SMR shall be submitted to the Regional Water Board in accordance with Section F.4.a-g. above. However, until USEPA approves the electronic signature or other signature technologies, Dischargers that are using the ERS must submit a hard copy of the original transmittal letter, an ERS printout of the data sheet, a violation report, and a receipt of the electronic transmittal.

3) Annual Reporting Requirements: Dischargers who have submitted data using the ERS for at least one calendar year are exempt from submitting an annual

report electronically, but a hard copy of the annual report shall be submitted according to Section XIII.

XII. OTHER MONITORING REQUIREMENTS

Regional Monitoring Program

The Discharger has agreed to continue to participate in the Regional Monitoring Program, which involves collection of data on pollutants and toxicity in water, sediment and biota of the Estuary. The Discharger's participation and support of the RMP is used in consideration of the level of receiving water monitoring required by this Order.

XIII. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (**Attachment D and G**) related to monitoring, reporting, and recordkeeping.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit self-monitoring reports. Until such notification is given, the Discharger shall submit self-monitoring reports in accordance with the requirements described below.

2. The Discharger shall submit monthly Self Monitoring Reports including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. Monthly reports shall be due 30 days after the end of each calendar month**.**

C. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-7. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	Effective date of permit	All	First day of second calendar month following month of sampling
1/day	Effective date of permit	Daily	First day of second calendar month following month of sampling
5/week	Effective date of permit	Any five days during a week at a time when the Refinery process wastewater is being treated at the JTP	First day of second calendar month following month of sampling
3/week	Effective date of permit	Any three days during a week at a time when the Refinery process wastewater is being treated at the JTP	First day of second calendar month following month of sampling

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
2/week	Effective date of permit	Any two days during a week at a time when the Refinery process wastewater is being treated at the JTP	First day of second calendar month following month of sampling
1/week	Effective date of permit	Once per week at a time when the Refinery process wastewater is being treated at the JTP	First day of second calendar month following month of sampling
1/2 weeks	Effective date of permit	Once during a two-week period at a time when the Refinery process wastewater is being treated at the JTP	First day of second calendar month following month of sampling
1/month	Effective date of permit	Any day in a calendar month at a time when the Refinery process wastewater is being treated at the JTP	First day of second calendar month following month of sampling
1/quarter	Effective date of permit	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31 (Any one day at a time when the Refinery process wastewater is being treated at the JTP)	May 1 August 1 November 1 February 1
2/year (once-through cooling water and wastewater discharge)	Effective date of permit	Once during wet season (typically November 1 through April 30), once during dry season (typically May 1 through October 31)	June 1 December 1
2/year (storm water)	Effective date of permit	Two times during the wet season when rains, with the first sampling on the first storm event of the season.	Annually by July 1
1/year	Effective date of permit	January 1 through December 31 For priority pollutant monitoring: Alternate between one year during wet season and the following year during dry season (typically May 1 through October 31).	February 1
1/5 years	Effective date of permit	Once during permit term	First day of second calendar month following month of sampling

4. The Discharger shall report with each sample result the applicable Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.

   The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

   For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

d. The Dischargers shall instruct laboratories to establish calibration standards so that the RL value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. The Discharger shall not use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.

5. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations.

6. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

7. SMRs must be submitted to the Regional Water Board, signed and certified as required by the standard provisions (**Attachment D** and **G**), to the address listed below:

   Executive Officer
   California Regional Water Quality Control Board
   San Francisco Bay Region
   1515 Clay Street, Suite 1400
   Oakland, CA 94612
   ATTN: NPDES Permit Division

8. The Discharger has the option to submit all monitoring results in an electronic reporting format approved by the Executive Officer. The Electronic Reporting System (ERS) format includes, but is not limited to, a transmittal letter, summary of violation details and corrective actions, and transmittal receipt. If there are any

discrepancies between the ERS requirements and the "hard copy" requirements listed in the MRP, then the approved ERS requirements supercede.

C. Discharge Monitoring Reports (DMRs)

1. As described in Section XIII.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the discharger to electronically submit self-monitoring reports. Until such notification is given, the Discharger shall submit discharge monitoring reports (DMRs) in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (**Attachment D**). The Discharge shall submit the original DMR and one copy of the DMR to the address listed below:

   State Water Resources Control Board
   Discharge Monitoring Report Processing Center
   Post Office Box 671
   Sacramento, CA 95812

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated or modified cannot be accepted.

D. Other Reports

Annual Reports. By February 1st of each year, the Discharger shall submit an annual report to the Regional Water Board covering the previous calendar year. The report shall contain the items described in Standard Provisions and Reporting Requirements, and SMP Part A, August 1993 (**Attachment G**).

ATTACHMENT E-1 – CHRONIC TOXICITY – DEFINITIONS OF TERMS AND SCREENING PHASE REQUIREMENTS

CHRONIC TOXICITY

DEFINITION OF TERMS & SCREENING PHASE REQUIREMENTS

I. DEFINITION OF TERMS

A. **No observed effect level** (NOEL) for compliance determination is equal to IC_{25} or EC_{25}. If the IC_{25} or EC_{25} cannot be statistically determined, the NOEL shall be equal to the NOEC derived using hypothesis testing.

B. **Effective concentration** (EC) is a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Karber. EC_{25} is the concentration of toxicant (in percent effluent) that causes a response in 25% of the test organisms.

C. **Inhibition Concentration** (IC) is a point estimate of the toxicant concentration that would cause a given percent reduction in a non-lethal, non-quantal biological measurement, such as growth. For example, an IC_{25} is the estimated concentration of toxicant that would cause a 25% reduction in average young per female or growth. IC values may be calculated using a linear interpolation method such as USEPA's Bootstrap Procedure.

D. **No observed effect concentration** (NOEC) is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. It is determined using hypothesis testing.

II. CHRONIC TOXICITY SCREENING PHASE REQUIREMENTS

A. The Discharger shall perform screening phase monitoring:

1. Subsequent to any significant change in the nature of the effluent discharged through changes in sources or treatment, except those changes resulting from reductions in pollutant concentrations attributable to source control efforts, or

2. Prior to Permit reissuance. Screening phase monitoring data shall be included in the NPDES Permit application for reissuance. The information shall be as recent as possible, but may be based on screening phase monitoring conducted within 5 years before the permit expiration date.

B. Design of the screening phase shall, at a minimum, consist of the following elements:

1. Use of test species specified in Tables 1 and 2 (attached), and use of the protocols referenced in those tables, or as approved by the Executive Officer;

2. Two stages:

a. **Stage 1** shall consist of a minimum of one battery of tests conducted concurrently. Selection of the type of test species and minimum number of tests shall be based on Table 3 (attached); and

b. **Stage 2** shall consist of a minimum of two test batteries conducted at a monthly frequency using the three most sensitive species based on the Stage 1 test results and as approved by the Executive Officer.

3. Appropriate controls; and

4. Concurrent reference toxicant tests.

A. The Discharger shall submit a screening phase proposal to the Executive Officer for approval. The proposal shall address each of the elements listed above.

Table E-1. Critical Life Stage Toxicity Tests for Estuarine Waters

Test Species	Scientific Name	Effect	Duration	Reference
alga	*(Skeletonema costatum) (Thalassiosira pseudonana)*	growth rate	4 days	1
red alga	*(Champia parvula)*	number of cystocarps	7-9 days	3
Giant kelp	*(Macrocystis pyrifera)*	percent germination; germ tube length	48 hours	2
abalone	*(Haliotis rufescens)*	abnormal shell development	48 hours	2
Oyster mussel	*(Crassostrea gigas) (Mytilus edulis)*	{abnormal shell development; {percent survival	48 hours	2
Echinoderms (urchins (sand dollar - Dendraster excentricus	*Strongylocentrotus purpuratus, S. franciscanus);*	percent fertilization	1 hour	2
shrimp	*(Americamysis bahia)*	percent survival; growth	7 days	3
shrimp	*(holmesimysis costata)*	percent survival; growth	7 days	2
topsmel	*(Atherinops affinis)*	percent survival; growth	7 days	2
silversides	*(Menidia beryllina)*	larval growth rate; percent survival	7 days	3

Toxicity Test References:

1. American Society for Testing Materials (ASTM). 1990. Standard Guide for conducting static 96-hour toxicity tests with microalgae. Procedure E 1218-90. ASTM Philadelphia, PA.

2. Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms. USEPA/600/R-95/136. August 1995

3. Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to Marine and Estuarine Organisms as specified in 40CFR 136. Currently, this is USEPA/600/4-90/003, July 1994. Later editions may replace this version.

Table E-2. Critical Life Stage Toxicity Tests For Fresh Waters

Species	Scientific Name	Effect	Test Duration	References
fathead minnow	*(Pimephales promelas)*	survival growth rate	7 days	4
water flea	*(Ceriodaphnia dubia)*	survival; number of young	7 days	4
alga	*(Selenastrum capricornutum)*	cell division rate	4 days	4

Toxicity Test Reference:

Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms as specified in 40CFR 136. Currently, this is the third edition, USEPA/600/4-91/002, July 1994. Later editions may replace this version.

Table E-3. Toxicity Test Requirements for Stage One Screening Phase

Requirements	Receiving Water Characteristics		
	Discharges to Coast	Discharges to San Francisco Bay ‡	
	Ocean	Marine/Estuarine	Freshwater
Taxonomic Diversity:	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish
Number of tests of each salinity type: Freshwater (†): Marine/Estuarine:	0 4	1 or 2 3 or 4	3 0
Total number of tests:	4	5	3

† The fresh water species may be substituted with marine species if:

1) The salinity of the effluent is above 1 parts per thousand (ppt) greater than 95% of the time, or

2) The ionic strength (TDS or conductivity) of the effluent at the test concentration used to determine compliance is documented to be toxic to the test species.

‡ Marine/Estuarine refers to receiving water salinities greater than 1 ppt at least 95% of the time during a normal water year.

Fresh refers to receiving water with salinities less than 1 ppt at least 95% of the time during a normal water year.

ATTACHMENT F – FACT SHEET

Table of Contents

List of Tables

ATTACHMENT F – FACT SHEET

As described in Section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	2 071006001
Dischargers	C&H Sugar Company, Inc. (C&H) Crockett Community Services District (CSD)
Name of Facility	C&H Sugar Refinery, Joint C&H-CSD Philip F. Meads Water Treatment Plant (JTP) and its collection system
Facility Address	830 Loring Avenue
	Crockett, CA 94525
	Contra Costa County
Facility Contact, Title and Phone	Elizabeth M. Crowley, Environmental Compliance Manager, C&H Sugar Company, 510-787-4352 Kent Peterson, General Manager, Crockett Community Services District, 510-787-2992
Authorized Person to Sign and Submit Reports	Elizabeth M. Crowley, Environmental Compliance Manager, C&H Sugar Company, 510-787-4352 Kent Peterson, General Manager, Crockett Community Services District, 510-787-2992
Mailing Address	C&H - 830 Loring Avenue, Crockett, CA 94525 CSD - P.O. Box 578, Crockett, California 94525
Billing Address	830 Loring Avenue, Crockett, CA 94525
Type of Facility	Sugar Processing / Privately owned wastewater treatment plant
Major or Minor Facility	Major
Threat to Water Quality	2
Complexity	A
Pretreatment Program	No
Reclamation Requirements	No
Facility Permitted Flow	35 MGD for once-through cooling water discharge through 001; 1.78 MGD for treated wastewater discharge through 002
Facility Design Flow *	35 MGD for once-through cooling water discharge through 001; 1.78 MGD for treated wastewater discharge through 002
Watershed	Suisun Basin
Receiving Water	Carquinez Strait within Northern San Francisco Bay
Receiving Water Type	Surface Water

* The basis for 35 MGD is from James Montgomery, 1973; 1.78 MGD is based on Operation and Maintenance Manual, Engineering Science.

A. C&H Sugar Company, Inc. (C&H) is currently discharging under Order No. 00-025 (NPDES Permit No. CA0005240) from several locations within the C&H Sugar Company, Inc. Refinery. The Refinery discharges once-through cooling waters and condensed

vapors, untreated, at Discharge Point 001, as well as treated wastewater [sugar refining wastes and domestic wastewater from the Crockett Community Services District (CSD)] at Discharge Point 002, and storm waters from Discharge Points 003 through 016, into Carquinez Strait. The Dischargers (collectively C&H and CSD) are subject to a Joint Use Agreement, which allows the CSD to discharge to and make use of the wastewater treatment facility located on the grounds of the Refinery. The wastewater treatment facility, which discharges through Discharge Point 002, is owned jointly by C&H and the CSD; and it is operated by C&H.

B. The Refinery and CSD discharge wastewater to Carquinez Strait, a water of the United States located in North San Francisco Bay.

C. The Discharger filed a Report of Waste Discharge and submitted an application for reissuance of its Waste Discharge Requirements (WDRs) and NPDES permit on October 15, 2004. Order No. 00-025 (previous permit or previous Order), which was adopted on April 19, 2000, automatically continued in effect after its expiration date on April 19, 2005.

II. FACILITY DESCRIPTION

C&H owns and operates a sugar refinery that processes raw cane sugar at an average melt rate of 3,300 tons per day over 260 operating days per year. The Refinery has an average melt rate capacity of 3,600 tons per day. The Refinery typically operates on a 7-day operating cycle, with 5 days of operation followed by 2 days of down time, and it delivers both crystalline and liquid refined sugars from the Refinery by truck and rail. The Refinery may go back to its old practice which ran on a 14-day cycle, with 10 days on and 4 days down.

The Refinery is located on land owned by the California State Lands Commission. The Refinery, including the wastewater treatment systems, is operated by C&H. The wastewater treatment plant is known as the Philip F. Meads Water Treatment Plant or Joint Treatment Plant (JTP), as it is co-owned by and subject to a joint use agreement between C&H Sugar and the CSD.

A. Description of Wastewater Treatment

This Order regulates discharges from Discharge Points 001 and 002. Wastewater discharged at Discharge Point 001 is untreated once-through cooling water from barometric condensers on vacuum pans, evaporators, and turbine generators. Wastewater discharged at Discharge Point 002 is treated effluent from the JTP, a biological treatment plant that receives refinery process wastewaters as well as pretreated domestic wastewater conveyed from the CSD. Refinery process wastewater (char washings, scum and filter aid slurries, refinery equipment washdowns, rail car washings, and contaminated storm water runoff from process areas), with the exception of char filter wash water, is pH adjusted and clarified, before being combined with char process wash water and pumped to the JTP.

Process wastewaters combine with flow from the CSD at the JTP in a surge basin that precedes three one-million-gallon capacity aeration basins. As process wastes typically have high carbohydrate and low nutrient content, phosphoric acid and urea are added to

enhance biological treatment. Wastewater from the aeration basins is clarified by two dissolved air flotation units. Clarified wastewater is disinfected using sodium hypochlorite and dechlorinated with sodium bisulfite before being discharged to Carquinez Strait. Solids removed during wastewater treatment, are dewatered on a belt filter and trucked off-site for disposal as soil amendment.

The annual average chemical oxygen demand (COD) concentration in the primary-treated refinery wastewater is approximately 3,930 mg/l. If conditions of high COD loading and low oxygen supply occur, they will result in unsatisfactory bioprocess performance. At times, floating floc has been observed at the sampling location in the chlorination basin. It is a possibility that these are the result of poor clarifier performance at times of heavy COD loads.

B. Description of Intake Water Structure

Water withdrawn from the Carquinez Strait enters the cooling water intake structure through a 10-foot wide opening with 0.5 inch vertical steel bars spaced 4 inches apart and extending from the bottom to above the water line. Water is filtered through a single traveling screen with 0.38 inch square mesh opening and effective area at Mean Low Low Water (MLLW) of 111 feet. The screen, manufactured by Envirex (model 62430) was replaced in 1993. Water passes through the intake screen before reaching the 48 inch diameter pipe leading to the pump room. Previous 316(b) studies indicate that the C&H cooling water intake structure reflects the best available technology for minimizing adverse environmental impacts.

C. Discharge Points and Receiving Waters

This Order regulates discharge from the Refinery through Discharge Point 001 and discharge from the wastewater treatment plant through Discharge Point 002, as well as storm water discharges through Discharge Points 003 through 016 as briefly described below.

Table F-2. Discharge Points

C&H Sugar Company Discharge Points			
No.	**Latitude**	**Longitude**	**Description**
001	38° 03′ 27″	122° 13′ 06″	Discharge consists of approximately 22.5 MGD of non-contact, once-through cooling water from the Refinery's barometric condenser, condensed vapors from vacuum pans, cooling waters from evaporators and steam turbine heat exchangers. The point of discharge is a deep-water diffuser that extends approximately 200 feet offshore into Carquinez Strait to a depth of 47 feet.
002	38° 03′ 30″	122° 13′ 28″	Discharge consists of approximately 0.93 MGD of treated wastewaters from the treatment plant. Refinery process wastewaters, which account for approximately 60 percent of the total discharge, include bone char washings, scum and filter aid slurries, refinery equipment wash down, rail car washings, and storm water runoff from process areas. The CSD's contribution averages 0.33 MGD but can range as high as 3.3 MGD during wet weather periods. The point of discharge is a deep-water multi-port diffuser located directly below the Carquinez Bridge, 637 feet west of the refinery plant.

C&H Sugar Company Discharge Points			
No.	**Latitude**	**Longitude**	**Description**
003	38°03'27''	122°13'03''	Discharge consists of storm water runoff from an area between the boiler house and Bankers Warehouse No. 3, as well as from boiler house roof drains.
005	38°03'27''	122°13'11''	Discharge consists of storm water runoff from an area of approximately 216,500 square feet located centrally in the Refinery yard and from an area south of the railroad tracks on both sides of the extension of Rolph Avenue. Runoff from the refinery combines with street runoff from Crockett and discharges to Carquinez Strait via a shallow collection point.
006	38°03'27''	122°13'31''	Discharge consists of storm water runoff from a large plant area south of the railroad tracks used for product staging prior to loading. Discharge occurs to Carquinez Strait via a pipe under the railroad tracks to a drainage on the south side of the warehouse yard.
007	38°03'27''	122°13'18''	Discharge consists of storm water runoff from community areas and hills as well as from a small area on the fringe of the truck staging area and occurs to Edwards Creek at a point before the creek enters the culverts extending under the railroad tracks to Carquinez Strait.
008	38°03'27''	122°13'11''	Discharge consists of storm water runoff from an area of approximately 19,000 square feet located at the western portion of the Refinery yard.
009	38°03'26''	122°12'46''	Discharge consists of storm water runoff from the refinery's raw sugar loading dock, an area of approximately 30,625 square feet. Discharge occurs to Carquinez Strait via an oil water separator located at the eastern end of the dock.
011	38°03'27''	122°13'11''	Discharge consists of storm water runoff from an area of approximately 2,500 square feet north of the Herreshoff Kiln.
012	38°03'27''	122°13'11''	Discharge consists of storm water runoff from an area of approximately 1,550 square feet located to the east of the canopied product and material storage area in the Refinery yard.
013	38°03'27''	122°13'15''	Discharge consists of storm water runoff from an area of approximately 15,690 square feet south of Warehouse No. 1 at the western side of refinery.
014	38°03'22''	122°13'15''	Discharge consists of storm water runoff from a refinery yard area of approximately 74,320 square feet adjacent to the primary waste treatment plant and a hazardous waste storage area.
016	38°03'19''	122°13'36''	Discharge consists of storm water runoff from undeveloped areas near the wastewater treatment plant as well as community streets and hills adjacent to the JTP.

D. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

1. Effluent Limitations.

Discharge Points 001 and 002

- Total BOD_5 (lbs/day) discharged at Discharge Points 001 and 002 shall not exceed the following limitations, determined by summing contributions (lbs) from the sugar Refinery and the CSD.

Table F-3. Limitations of Order No. 00-025

BOD_5 Limitation		C&H Sugar		CSD
Monthly Average (lbs/day)	=	2,417	+	[30 mg/L x flow (MGD) x 8.34 (lbs/gal)]
Daily Maximum (lbs/day)	=	6,688	+	[60 mg/L x flow (MGD) x 8.34 (lbs/gal)]

- Discharges from Discharge Points 001 and 002 shall not have a pH value less than 6.0 nor greater than 9.0.

Discharge Point 002

- Total TSS (lbs/day) discharged at Discharge Points 002 shall not exceed the following limitations, determined by summing contributions (lbs) from the sugar refinery and the CSD.

Table F-4. Limitations of Order No. 00-025

TSS Limitation		C&H Sugar		CSD
Monthly Average (lbs/day)	=	506	+	[30 mg/L x flow (MGD) x 8.34 (lbs/gal)]
Daily Maximum (lbs/day)	=	1,517	+	[60 mg/L x flow (MGD) x 8.34 (lbs/gal)]

- The median of 5 consecutive samples of effluent collected at Discharge Point 002 shall not exceed 240 MPN (total coliform bacteria)/100 mL; and no single sample shall exceed 10,000 MPN/100 mL.

- Discharges from Discharge Point 002 shall not have a total residual chlorine concentration greater than 0.0 mg/L.

- Discharges from Discharge Point 002 shall not exceed the following effluent limitations for settleable matter.

Table F-5. Limitations of Order No. 00-025

Effective Dates	Monthly Average	Daily Maximum
4/19/2000 – 4/18/2005	10 mL/L/hr	20 mL/L/hr
4/19/2005 – 4/18/2010	1.0 mL/L/hr	2.0 mL/L/hr

- Discharges from Discharge Point 002 shall not exceed the following effluent limitation for acute toxicity.

  The survival of test fishes in 96-hour flow through bioassays of Waste 002, as discharged, shall be an eleven sample median value of not less than 90 percent survival; and an eleven sample 90^{th} percentile value of not less than 70 percent survival.

- Discharges from Discharge Point 002 shall not exceed the following final limitations for lead and PAHs.

Table F-6. Limitations of Order No. 00-025

Pollutant	Monthly Average	Daily Maximum
Lead	---	50.3 µg/L
PAHs	0.49 µg/L	150 µg/L

- Discharges from Discharge Point 002 shall not exceed the following interim limitations for copper, mercury, and nickel.

Table F-7. Limitations of Order No. 00-025

Pollutant	Monthly Average	Daily Maximum	Running Annual Average	Monthly Average Mass Loading
Copper	---	37 µg/L	1.84 lbs/month	---
Mercury	0.21 µg/L	1.0 µg/L	0.04 lbs/month	---
Nickel	---	53 µg/L	---	1.5 lbs/month

2. Effluent Characterization.

Effluent discharged at Discharge Points 001 and 002 is characterized by the Discharger in its ROWD as follows.

Table F-8. Effluent Characterization

Parameter	Units	Max Daily Value	Max 30 Day Average Value	Long Term Average Value
Discharge Point 001				
Flow	MGD	40.2	24.4	21.7
BOD	mg/L	140	51	14.6
	lbs/day	39,100	13,700	3,600
pH	SU	6.3 – 8.0	7.4 – 7.7	--
Discharge Point 002				
Flow	MGD	1.65	0.77	0.69
BOD	mg/L	16	7	6
	lbs/day	108	92	39
TSS	mg/L	24	17	11
	lbs/day	180	101	70
pH	SU	6.8/8.4 (low/high)	7.4/7.6 (low/high)	--

E. Compliance Summary

The following table summarizes incidents of non-compliance with effluent limitations for Discharge Points 001 and 002 during the previous permit term. If parameters/pollutants do not appear in the table, then no incidents of non-compliance were reported during the permit term.

Table F-9. Compliance Summary

Parameter	Number of Incidents of Non-Compliance				
	2001	2002	2003	2004	2005
Discharge Point 001 and 2 (combined)					
BOD_5 [1]	4	4	3	8	4
Discharge Point 002					
Total Residual Chlorine		2	1		
Total Coliform Bacteria		5			6
Mercury				2	
Nickel		1	2		

[1] BOD5 limitation of Order No. 00-025 was a single limitation that limited the total (combined) mass (lbs) of BOD_5 discharged from Discharge points 001 and 002.

F. Planned Changes

N/A

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

A. Legal Authorities

1. This Order is issued pursuant to CWA Section 402 and implementing regulations adopted by the USEPA and CWC Chapter 5.5, Division 7. It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to CWC Article 4, Chapter 4 for discharges that are not subject to regulation under CWA Section 402.

2. NPDES Permit/USEPA concurrence are based on 40 CFR 123.

3. Order expiration and reapplication are based on 40 CFR 122.46 (a).

B. California Environmental Quality Act (CEQA)

This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with CWC Section 13389.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan for the San Francisco Basin* (Region 2) (hereinafter the Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Regional Water Board amended the Basin Plan

(Resolution No. R2-2004-0003) on January 21, 2004. The State Water Board and the Office of Administrative Law approved these amendments on July 22, 2004, and October 4, 2004, respectively. The USEPA gave final approval to the amendment on January, 5, 2005.

2. **Thermal Plan.** The State Water Board adopted a Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters and establishes specific limitations for thermal wastes (cooling water and industrial process water used for the purpose of transporting waste heat) and elevated temperature wastes (liquid, solid, or gaseous material including thermal waste discharged at a temperature higher than the natural temperature of receiving water), which are applicable to the C&H Sugar Company facility.

   The Thermal Plan establishes the following limitations for existing discharges of elevated temperature waste and thermal waste to estuarine environments.

Table F-10. Thermal Plan Requirements

Thermal Plan Section No.	Limitation
5. A. (1)	Elevated temperature waste shall comply with the following:
a	The maximum temperature shall not exceed the natural receiving water temperature by more than 20ºF.
b	Elevated temperature waste discharges, either individually or combined with other discharges, shall not create a zone, defined by water temperatures of more than 1ºF above natural receiving water temperatures, which exceeds 25 percent of the cross-sectional area of a main river channel at any point.
c	No discharge shall cause a surface water temperature rise greater than 4ºF above the natural temperature of the receiving waters at any time or place.
d	Additional limitations shall be imposed when necessary to assure protection of beneficial uses.
5. A. (2)	Thermal waste discharges shall comply with the provisions of 5. A. (1), above, and in addition, the maximum temperature of thermal waste discharges shall not exceed 86ºF.

   Based on State Board Resolution No. 75-72, issued on July 17, 1975 and approved by USEPA on September 2, 1975, discharges from Discharge Points 001 and 002 are exempt from Section Nos. 5.A.(1). a. and 5.(A).(2) above.

3. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, amending it on May 4, 1995 and November 9, 1999, and adopted the CTR on May 18, 2000, amending it on February 13, 2001. These rules include water quality criteria for priority pollutants and are applicable to discharges from this facility

4. **State Implementation Policy.** On March 2, 2000, State Water Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The SIP

became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Boards in their basin plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by USEPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP became effective on May 18, 2000. The State Water Board amended the SIP on February 24, 2005, and the amendments became effective on May 31, 2005. The SIP includes procedures for determining the need for and calculating water quality-based effluent limitations (WQBELs), and requires dischargers to submit data sufficient to do so.

5. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes. [40 C.F.R 131.21; 65 Fed. Reg. 24641 (April 27, 2000)] Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

6. **Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. The technology-based effluent limitations consist of restrictions on biochemical oxygen demand (BOD), total suspended solids (TSS), and pH. Restrictions on these pollutants are specified in federal regulations and are no more stringent than required by the CWA. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR 131.21 (c) (1). The remaining water quality objectives and beneficial uses implemented by this Order [arsenic, cadmium, chromium (VI), copper (fresh water), lead, nickel, silver (1-hour), and zinc] were approved by USEPA on January 5, 2005, and are applicable water quality standards pursuant to 40 CFR 131.21 (c) (2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

7. **Antidegradation Policy.** NPDES regulations at 40 CFR 131.12 require that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, incorporating the requirements of the federal antidegradation policy and requiring that existing quality of waters be maintained unless degradation is justified based on specific findings. As discussed in detail in Section IV.G of this Fact Sheet the permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution 68-16.

8. **Anti-Backsliding Requirements.** CWA Sections 402 (o) (2) and 303 (d) (4) and NPDES regulations at 40 CFR 122.44 (l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. As discussed in detail in the Fact Sheet (Attachment F), the prohibitions, limitations, and conditions of this Order are consistent with applicable federal and State anti-backsliding requirements.

9. **Monitoring and Reporting Requirements.** 40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC Sections 13267 and 13383 authorize the Regional Water Boards to require technical and monitoring reports. The MRP, included as Attachment E to this Order, establishes monitoring and reporting requirements to implement federal and State requirements. The MRP may be amended by the Executive Officer pursuant to USEPA regulation 40 CFR 122.62, 122.63, and 124.5.

D. Impaired Water Bodies on CWA 303 (d) List

On June 6, 2003, the USEPA approved a revised list of impaired water bodies prepared by the State pursuant to CWA section 303(d) - specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. The pollutants impairing Carquinez Strait include chlordane, DDT, diazinon, dieldrin, dioxin compounds, exotic species, furan compounds, mercury, PCBs, dioxin-like PCBs, and selenium. The SIP requires final effluent limitations for all 303 (d)-listed pollutants to be based on total maximum daily loads (TMDLs) and associated waste load allocations (WLAs).

1. **Total Maximum Daily Loads.** The Regional Water Board plans to adopt TMDLs for pollutants on the 303 (d) list in the San Francisco Bay within the next ten years. Future review of the 303 (d)-list for the Bay may result in revision of the schedules, provide schedules for other pollutants, or both.

2. **Waste Load Allocations.** TMDLs will establish waste load allocations (WLAs) for point sources and load allocations (LAs) for non-point sources, and will result in achieving applicable water quality standards for the impaired waterbodies. Final effluent limitations for impairing pollutants for this Discharger will ultimately be based on WLAs that are derived from the TMDLs.

3. **Implementation Strategy.** The Regional Water Board's strategy to collect water quality data and to develop TMDLs is summarized below.

a. **Data Collection.** The Regional Water Board has provided dischargers to the Bay an option to, collectively, assist in developing and implementing analytical techniques capable of detecting 303 (d)-listed pollutants to, at least, their respective levels of concern or to levels of the applicable WQOs/WQC. This collective effort may include development of sample concentration techniques for approval by the USEPA. The Regional Water Board will require dischargers to characterize pollutant loads from their facilities into water-quality limited receiving waters. Results will be used in the development of TMDLs and may be used to update or revise the 303 (d) list or to change WQOs/WQC for the impaired waterbodies, including Carquinez Strait within San Francisco Bay.

b. **Funding Mechanism.** The Regional Water Board has received, and anticipates continuing to receive, resources from federal and State agencies for TMDL development. To ensure timely development of TMDLs, the Regional Water Board intends to supplement these resources by allocating development costs among dischargers through the RMP or other appropriate funding mechanisms.

E. Other Plans, Polices and Regulations

N/A

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source discharges to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations; and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 CFR 122.44 (a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 122.44 (d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, three options exist to protect water quality: 1) 40 CFR 122.44 (d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304 (a); 2) proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information may be used; or 3) an indicator parameter may be established.

Several specific factors affecting the development of limitations and requirements in this Order are discussed as follows:

A. Discharge Prohibitions

1. **Prohibition III. A (No discharge other than as described in this Order).** This prohibition is the same as in the previous permit. This prohibition is based on California Water Code section 13260, which requires filing a Report of Waste Discharge before discharges can occur. Discharges not described in the ROWD, and subsequently in the Order, are prohibited.

2. **Prohibition III. B (No discharge except where a minimum initial dilution of 10 to 1 is provided).** This prohibition is the same as the previous permit and is based on Discharge Prohibition No. 1 from Table 4-1 of the Basin Plan, which prohibits discharges that do not receive a minimum 10:1 initial dilution. Furthermore, this Order allows a 10:1 dilution credit in the calculation of some water quality based effluent limitations, and these limits would not be protective of water quality, if the discharge did not actually achieve a 10:1 minimum initial dilution.

3. **Prohibition III. C (No discharge containing algaecides or anti-fouling additives at Discharge Point 001).** This prohibition is retained from Order No. 00-025.

4. **Prohibition III. D (No bypasses except under the conditions at 40 CFR 122.41(m)(4)(i)(A), (B) and (C)):** This prohibition is based on 40 CFR 122.41(m)(4).

5. **Discharge Prohibition III.E. (No sanitary sewer overflows (SSO) to waters of the United States)**: The Discharge Prohibition No. 15 from Table 4-1 of the Basin Plan, and the Clean Water Act prohibits the discharge of wastewater to surface waters except as authorize under an NPDES permit. POTWs must achieve secondary treatment, at a minimum, and any more stringent limitations that are necessary to achieve water quality standards. (33U.S.C. §1311(b)(1)(B) and (C).) Thus, an SSO that results in the discharge of raw sewage, or sewage not meeting secondary treatment, to surface waters is prohibited under the Clean Water Act and the Basin Plan.

B. Technology-Based Effluent Limitations for Discharge Point 001 and Discharge Point 002

1. Scope and Authority

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

- Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

- Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

- Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the “cost reasonableness” of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

- New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires USEPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and section 125.3 of the Code of Federal Regulations authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the permit writer must consider specific factors outlined in section 125.3.

Pursuant to Section 306 (b) (1) (B) of the CWA, U.S. EPA has established standards of performance (technology-based limitations and standards) for the crystalline cane sugar refining industry at 40 CFR 409 Subpart B. These regulations apply to the Discharger's facility and were used to develop limitations and requirements of Order No. 00-025. (See Finding 25 of Order No. 00-025.)

2. Applicable Technology-Based Effluent Limitations

a. Effluent Guidelines for Crystalline Cane Sugar Refinery.

The following specific standards of performance for existing facilities, representing the best practicable control technology currently available and the best conventional pollutant control technology, as established at 40 CFR 409 Subpart B, are applicable to the C&H Sugar Company facility.

40 CFR 409.22 (a). Any crystalline cane sugar refinery discharging both barometric condenser cooling water and other process waters shall meet the following limitations. The BOD_5 limitation is determined by the addition of the net BOD_5 attributed to the barometric condenser cooling water to that amount of BOD_5 attributed to the process water. The TSS limitation is that amount of TSS attributed to the treated process water. Where the barometric condenser cooling water and process water streams are mixed and impossible to measure separately prior to discharge, the values should be considered net.

Table F-11. Technology-Based Requirements in 40 CFR 409.22(a)

Effluent Characteristic	Effluent Limitation	
	Daily Maximum	30-Day Average
BOD_5 (lbs/ton [a])	2.38	0.86
TSS (lbs/ton [a])	0.54	0.18
pH	6.0 – 9.0	

[a] lbs BOD_5 or TSS per ton of melt (raw sugar contained within aqueous solution at the beginning of the process for production of refined cane sugar).

40 CFR 409.22 (b). Any crystalline cane sugar refinery discharging barometric condenser cooling water only should be required to achieve the following net limitations.

Table F-12. Technology-Based Requirements in 40 CFR 409.22(b)

Effluent Characteristic	Effluent Limitation	
	Daily Maximum	30-Day Average
BOD_5 (lbs/ton [a])	2.04	0.68

[a] lbs BOD_5 or TSS per ton of melt (raw sugar contained within aqueous solution at the beginning of the process for production of refined cane sugar).

Effluent standards for process wastewater only. The technology-based standards specified in 40 CFR 409 (a) and (b) as described above are interpreted for discharging process wastewater only, as shown in Table F-14. These technology-based standards are the difference between those specified in 40 CFR 409.22(a) and (b).

Table F-13. Technology-Based Requirements for Process Wastewater

Effluent Characteristic	Effluent Limitation	
	Daily Maximum	30-day Average
BOD_5 (lbs/ton) [a]	0.34	0.18
TSS (lbs/ton)	0.54	0.18
pH	6.0 – 9.0	

b. Technology-Based Effluent Limitations for Discharge Points 001 and 002

(1) Discharge Point 001

The technology-based standards described above are interpreted to require the following effluent limitations for Discharge Point 001 (as a discharge of barometric cooling water only).

Table F-14. Technology-Based Limitations (001)

Constituent	Units	Effluent Limitations	
		Maximum Daily	Monthly Average
BOD_5	lbs/day	6,700	2,200
pH	pH units	6.0 – 9.0 at all times	

The BOD_5 effluent limitations are based on an average melt rate of raw cane sugar of 3,300 tons per day:

BOD_5 maximum daily limit (lbs/day) = 2.04 lbs/ton * 3,300 tons/day
= 6,732 (lbs/day)

BOD_5 monthly average limit (lbs/day) = 0.68 lbs/ton * 3,300 tons/day
= 2,244 (lbs/day)

The final mass loading limits were rounded to two significant figures, as shown in Table F-15.

(2) Discharge Point 002

Discharge Point 002 contains both process wastewater from the Refinery and municipal wastewater from CSD. The technology-based standards specified in 40 CFR 409 (a) and (b) are interpreted to require BOD_5 and TSS mass-loading effluent limitations for Discharge Point 002 (discharging process wastewater only). In addition, Basin Plan provides technology-based effluent limits for all wastewater treatment plants, including pH, oil and grease, settleable matter, total chlorine residual, and total coliform bacteria.

Table F-15. Summary of Technology-Based Limitations (002)

Constituent	Units	Effluent Limitations			
		Maximum Daily	Monthly Average	Instantaneous Minimum	Instantaneous Maximum
BOD_5[1]	lbs/day	2,000	730	---	---
TSS	lbs/day	2,600	730	---	---
pH	s.u.	---	---	6.0	9.0
Oil and Grease	mg/L	20	10	---	---
Total Chlorine Residual	mg/L	---	---	---	0.0
Settleable Matter					
Before April 18, 2010	mL/L/hr	2.0	1.0	---	---
After April 18, 2010	mL/L/hr	0.2	0.1	---	---

i) **BOD_5 and TSS mass loading effluent limits.** For this permit reissuance, Regional Board staff applied a new approach, which is based on 40 CFR 125.3(c)(2) and (3) and relies on Best Professional Judgment. The BOD_5 and TSS effluent limitations are the sum of those for the process wastewater and those for the municipal wastewater. The technology-based standards specified in 40 CFR 409(a) and (b) are interpreted for process wastewater as shown in Table F-13 above; the limits are calculated based on an average melt rate of raw cane sugar of 3,300 tons per day. The BOD_5 and TSS daily maximum limits for secondary treatment of sewage wastewater are from 40 CFR 133.102. The use of BOD_5 and TSS daily maximum effluent limits of 60 mg/L in mass loading limit calculation is retained from previous permit. Municipal wastewater maximum daily flow rate of 1.67 MGD and maximum monthly average flow rate of 0.54 MGD from CSD, observed during 2002 to 2005, were used in calculating loadings from CSD.

BOD_5 maximum daily limit (lbs/day) = 0.34 lbs/ton * 3,300 tons/day + 1.67 MGD*60 mg/L*8.34 =1,958 (lbs/day)

BOD_5 monthly average limit (lbs/day) = 0.18 lbs/ton * 3,300 tons/day + 0.54 MGD*30 mg/L*8.34 = 729 (lbs/day)

TSS maximum daily limit (lbs/day) = 0.54 lbs/ton * 3,300 tons/day
+ 1.67 MGD*60 mg/L*8.34 = 2,618 (lbs/day)

TSS monthly average limit (lbs/day) = 0.18 lbs/ton * 3,300 tons/day
+ 0.54 MGD*30 mg/L*8.34 = 729 (lbs/day)

where: Conversion factor (8.34) in [(L•lb)/(gallon•kg)]
= 3.7854 L/gallon x 2.2 lbs/kg

The final mass loading limits were rounded to two significant figures, as shown in Table F-15.

Regional Water Board staff evaluated the Discharger's performance data and found that the Discharger would have had no problem complying with the proposed new technology-based limits from 2001 through 2005. Board staff concluded that immediate compliance with these limits is feasible. It is also concluded that the proposed limits represent Best Practicable Control Technology (BPT) and Best Conventional Pollutant Control Technology (BCT). In setting these limits, the factors specified in 40 CFR 125.3(d), as shown in the table below were considered.

Table F-16. Factors Considered Pursuant to 40 CFR 125.3(d)

Factors	Considerations
Cost relative to benefits	The cost of imposing these limits is reasonable given that the Discharger can comply without modifying its existing process.
Comparison of cost and pollutant reductions from publicly owned treatment works to cost and pollutant reductions from sugar refineries	The facility provides secondary treatment of CSD wastewater; therefore, the cost of continuing its operations is comparable to the costs for comparable publicly owned treatment works.
Age of equipment and facilities	The limits can be met with existing equipment and facilities, which must be also maintained to comply with secondary treatment standards for municipal wastewater.
Process employed	The limits can be met with the existing process.
Engineering aspects of various controls	The existing controls are practicable and capable of meeting the limits.
Process changes	No process changes are necessary to meet the limits.
Non-water quality environmental impacts	Because no process changes are necessary, no non-water quality impacts are foreseeable.

ii) **pH.** The effluent limitation for pH (6.0 – 9.0) for Outfalls 001 and 002 are retained from the previous permit and reflect requirements established by Table 4-2 of the Basin Plan for deep water discharges of conventional pollutants.

Pursuant to 40 CFR 401.17, "pH Effluent Limitations Under Continuous Monitoring," if the Discharger opts to use continuous pH monitoring, the Discharger will be in compliance with the pH limitation specified herein, provided that both of the following conditions are satisfied: (i) The total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (ii) No individual excursion from the range of pH values shall exceed 60 minutes.

iii) **Oil and grease.** This Order includes oil and grease technology-based effluent limitations . Technology-based effluent limitations are put in place to ensure that full secondary treatment is achieved by the wastewater treatment facility, as required under 40 CFR §133.102. Basin Plan Table 4-2 contains effluent limits for oil and grease of 20 mg/L as a daily maximum, and 10 mg/L as a monthly average for all treatment facilities. Therefore, these limits apply to JTP. The previous permit does not include an oil and grease effluent limit.

iv) **Chlorine Residual.** The instantaneous maximum limitation for chlorine of 0.0 mg/L for Outfall 002 is being retained by this Order and is based on the Basin Plan (Chapter 4, Table 4-2).

v) **Settleable Matter.** The interim and final effluent limitations for settleable matter are retained from the previous permit. The interim limits are established using BPJ. The CSD is required to continue its settleable matter special study to address the high settleable matter from excessive I/I. Final limitations for settleable matter, which become effective on April 18, 2010, reflect a level of effluent quality attainable by properly maintained and operated clarifiers.

vi) **Total Coliform Bacteria.** The purpose of these effluent limitations is to ensure adequate disinfection of the discharges in order to protect beneficial uses of the receiving waters. These effluent limits are retained from the previous permit, which are based on Basin Plan Table 4-2, total coliform limits for deepwater dischargers.

C. Water Quality-Based Effluent Limitations (WQBELs)

WQBELs have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law. The scientific procedures for calculating individual WQBELs are based on the CTR-SIP, which was approved by USEPA prior to May 1, 2001, or Basin Plan provisions approved by USEPA on May 29, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the [Clean Water] Act" pursuant to 40 CFR 131.21 (c) (1). Other water quality objectives and beneficial uses implemented by this Order (specifically arsenic, copper, lead, mercury, nickel, and zinc) were approved by USEPA

on January 5, 2005, and are applicable water quality standards pursuant to 40 CFR 131.21 (c) (2). Collectively, this Order's restrictions on individual pollutants are no more stringent than the applicable water quality standards for purposes of the Clean Water Act.

1. Scope and Authority

a. As specified in 40 CFR 122.44 (d) (1) (i), permits are required to include WQBELs for all pollutants "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard." The process for determining "Reasonable Potential" and calculating WQBELs, when necessary, is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other State plans and policies, the CTR, and NTR.

b. NPDES regulations and the SIP provide the basis to establish Maximum Daily Effluent Limitations (MDELs).

(1) NPDES Regulations. NPDES regulations at 40 CFR Part 122.45 (d) state:

"For continuous discharges all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall *unless impracticable* be stated as maximum daily and average monthly discharge limitations for all discharges other than publicly owned treatment works."

(2) SIP. The SIP (page 8, Section 1.4) requires WQBELs be expressed as MDELs and average monthly effluent limitations (AMELs).

c. MDELs are used in this Order to protect against acute water quality effects. The MDELs are necessary for preventing fish kills or mortality to aquatic organisms.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

a. **Applicable Beneficial Uses.** Beneficial uses applicable to Carquinez Strait are from the Basin Plan and are as follows:

Table F-17. Basin Plan Beneficial Uses of Carquinez Strait

Discharge Point	Receiving Water Name	Beneficial Use(s)
001 and 002	Carquinez Strait	• Industrial Service Supply (IND) • Ocean, Commercial, and Sport Fishing (COMM) • Estuarine Habitat (EST) • Fish Migration (MIGR) • Preservation of Rare and Endangered Species (RARE) • Water Contact Recreation (REC-1) • Noncontact Water Recreation (REC-2) • Fish Spawning (SPWN) • Wildlife Habitat (WILD) • Navigation (NAV).

b. The WQC and WQOs applicable to the receiving waters for this discharge are from the Basin Plan, the CTR, and the NTR.

(1) **Basin Plan.** The Basin Plan specifies numeric WQOs for 10 priority toxic pollutants, as well as narrative WQOs for toxicity and bioaccumulation in order to protect beneficial uses. The pollutants for which the Basin Plan specifies numeric objectives are arsenic, cadmium, chromium (VI), copper in freshwater, lead, mercury, nickel, silver, zinc, and cyanide (see also c., below). The narrative toxicity objective states in part "[a]ll waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms." The bioaccumulation objective states in part "[c]ontrollable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered." Effluent limitations and provisions contained in this Order are designed to implement these objectives, based on available information.

(2) **CTR.** The CTR specifies numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 57 priority toxic pollutants. These criteria apply to inland surface waters and enclosed bays and estuaries such as here, except that where the Basin Plan's Tables 3-3 and 3-4 specify numeric objectives for certain of these priority toxic pollutants, the Basin Plan's numeric objectives apply over the CTR (except in the South Bay south of the Dumbarton Bridge).

(3) **NTR.** The NTR established numeric aquatic life criteria for selenium, numeric aquatic life and human health criteria for cyanide, and numeric human health criteria for 34 toxic organic pollutants for waters of San Francisco Bay upstream to, and including, Suisun Bay and the Sacramento-San Joaquin Delta. This includes the receiving water for this Discharger.

c. Technical Support Document for Water Quality-Based Toxics Controls.

Where numeric objectives have not been established or updated in the Basin Plan, NPDES regulations at 40 CFR Part 122.44 (d) require that WQBELs be established based on USEPA criteria, supplemented where necessary by other relevant information, to attain and maintain narrative WQOs to fully protect designated beneficial uses.

To determine the need for and establish WQBELs, when necessary, the Regional Water Board staff has followed the requirements of applicable NPDES regulations, including 40 CFR Parts 122 and 131, as well as guidance and requirements established by the Basin Plan; USEPA's *Technical Support Document for Water Quality-Based Toxics Control* (the TSD, EPA/505/2-90-001, 1991); and the State Water Resources Control Board's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (the SIP, 2005).

d. Basin Plan and CTR Receiving Water Salinity Policy. The Basin Plan and CTR state that the salinity characteristics (i.e., freshwater versus saltwater) of the receiving water shall be considered in determining the applicable WQOs/WQC. Freshwater criteria shall apply to discharges to waters with salinities equal to or less than 1 ppt at least 95 percent of the time. Saltwater criteria shall apply to discharges to waters with salinities equal to or greater than 10 ppt at least 95 percent of the time in a normal water year. For discharges to waters with salinities in between these two categories, or tidally influenced fresh waters that support estuarine beneficial uses, the criteria shall be the lower of the salt- or freshwater criteria (the freshwater criteria for some metals are calculated based on ambient hardness) for each substance.

Salinity. The receiving water for discharges from the C&H Sugar Company is Carquinez Strait within northern San Francisco Bay - a tidally influenced waterbody with fresh water inflows. Regional Water Board staff evaluated salinity data for the period of March 1993 through August 2001 for the two nearest receiving water stations within the San Francisco Estuary Institutes's Regional Monitoring Program (RMP) – BD40 (Davis Point) and BD50 (Napa River). During this time period, salinity was greater than ten ppt in 30 of 57 samples; therefore, the receiving water is viewed as an estuarine environment for purposes of determining the need for and establishing water quality based effluent limitations. In these circumstances, the more stringent of the marine and fresh water WQOs/WQC from the Basin Plan, the CTR, and the NTR are applicable to discharges from the C&H Sugar Company facility.

e. Receiving Water Hardness.

Some fresh water WQOs/WQC for metals are hardness dependent; i.e., as hardness increases in the receiving water, the toxicity of certain metals decreases. To determine applicable water quality criteria for hardness dependent metals for purposes off this reasonable potential analysis, Regional Water Board staff used a hardness value of 48 mg/L $CaCO_3$, which is the

minimum hardness value observed in 26 samples collected at the Davis Point and the Napa River RMP monitoring stations between March 1993 and August 2001. When there are sufficient receiving water data for hardness, Regional Water Board staff typically perform a statistical analysis to determine an adjusted geometric mean – the value greater than 30 percent of the data points. When there is insufficient data to perform a statistical analysis, as in these circumstances, Regional Water Board staff use the minimum observed hardness in the receiving water. The Discharger has the option to sample for receiving hardness at the vicinity of the intake structure during the next 5-year permit term. The Regional Water Board may consider a new hardness value based on any new data for water quality objective/criteria calculation for the next permit reissuance.

3. Determining the Need for WQBELs

Assessing whether a pollutant has Reasonable Potential is the fundamental step in determining whether or not a WQBEL is required.

a. Reasonable Potential Analysis Methodology.

The RPA identifies the observed MEC in the effluent for each pollutant, based on effluent concentration data. There are three triggers in determining Reasonable Potential according to Section 1.3 of the SIP.

- The first trigger is activated if the MEC is greater than or equal to the lowest applicable WQO (MEC $\geq$ WQO), which has been adjusted, if appropriate, for pH, hardness, and translator data. If the MEC is greater than the adjusted WQO, then that pollutant has reasonable potential, and a WQBEL is required.

- The second trigger is activated if the observed maximum ambient background concentration (B) is greater than the adjusted WQO (B>WQO) and the pollutant was detected in any of the effluent samples.

- The third trigger is activated if a review of other information determines that a WQBEL is required to protect beneficial uses, even though both MEC and B are less than the WQO/WQC. A limitation may be required under certain circumstances to protect beneficial uses.

b. Effluent data.

The Regional Water Board's August 6, 2001 letter titled Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy (hereinafter referred to as the August 6, 2001 Letter) to all permittees, formally required the Discharger (pursuant to Section 13267 of the CWC) to initiate or continue to monitor for the priority pollutants using analytical methods that provide the best detection limits reasonably feasible. Regional Water Board staff analyzed this effluent data and the nature of upper San Francisco Bay to determine if the discharge has Reasonable Potential. The RPA was based on the effluent monitoring data from January

2002 through December 2005 for metals, inorganic priority pollutants, and organic priority pollutants.

c. Ambient Background Data.

(1) Ambient background values are used in the reasonable potential analysis (RPA) and in the calculation of effluent limitations. For the RPA, ambient background concentrations are the observed maximum detected water column concentrations. The SIP allows background to be determined on a discharge-by-discharge or water body-by-water body basis (SIP section 1.4.3). Consistent with the SIP, Regional Water Board staff has chosen to use a water body-by-water body basis because of the uncertainties inherent in accurately characterizing ambient background in a complex estuarine system on a discharge-by-discharge basis. The SIP states that for calculating WQBELs, ambient background concentrations are either the observed maximum ambient water column concentrations or, for criteria/objectives intended to protect human health from carcinogenic effects, the arithmetic mean of observed ambient water concentrations.

(2) The RMP station at Yerba Buena Island, located in the Central Bay, has been monitored for most of the inorganic (CTR constituent numbers 1–15) and some of the organic (CTR constituent numbers 16–126) toxic pollutants, and these data from the RMP, for the period March 1993 – August 2003, were used as background data in performing the RPA for this Discharger. Not all the constituents listed in the CTR were analyzed by the RMP during this time.

(3) These data gaps are addressed by the August 6, 2001 Letter. This letter formally requires the Dischargers (pursuant to Section 13267 of the California Water Code) to conduct ambient background monitoring and effluent monitoring for those constituents not currently sampled by the RMP and to provide this technical information to the Regional Water Board.

On May 15, 2003 and June 15, 2004 , a group of several San Francisco Bay Region Dischargers (known as the Bay Area Clean Water Agencies, or BACWA) submitted a collaborative receiving water study, entitled the San Francisco Bay Ambient Water Monitoring Interim Report, and Final CTR Sampling Update. These studies include monitoring results from sampling events in 2002 and 2003 for the remaining priority pollutants not monitored by the RMP.

The RPA was conducted and the WQBELs were calculated using RMP data from 1993 through 2003 for inorganics and organics at the Yerba Buena Island RMP station, and additional data from the BACWA Ambient Water Monitoring: Final CTR Sampling Update Report for the Yerba Buena Island RMP station. The Dischargers may utilize the receiving water study provided by BACWA to fulfill all requirements of the August 6, 2001 letter for receiving water monitoring in this Order.

d. RPA Determination.

Using the method prescribed in Section 1.3 of the SIP, Regional Water Board staff compared the effluent data and ambient background data with numeric and narrative WQOs in the Basin Plan and numeric WQC from USEPA, the NTR, and the CTR. The Basin Plan objectives and CTR criteria are shown in **Attachment F-2** of this Fact Sheet. The MECs, WQOs/WQC, bases for the WQOs/WQC, background concentrations used, and Reasonable Potential conclusions from the RPAs for Discharge Points 001 and 002 are listed in the following tables for all constituents analyzed. Some of the constituents in the CTR were not determined because of the lack of an objective/criteria or effluent data. Based on the RPA methodology in the SIP, some constituents did not demonstrate Reasonable Potential. The RPA results are shown below and **Attachment F-2** of this Fact Sheet. The pollutants that exhibit Reasonable Potential in discharges from Discharge Point 001 are arsenic, copper, lead, mercury, nickel, selenium, zinc, cyanide, dioxin-TEQ, and bis (2-ethylhexyl) phthalate, and in discharges at Discharge Point 002, are copper, lead, mercury, cyanide, dioxin-TEQ, and bis(2-ethylhexyl)phthalate.

Table F-18. RPA Summary (001)

CTR #	Priority Pollutants (µg/L)	Governing WQO/WQC	MEC or Minimum DL	Maximum Background or Minimum DL[1, 2]	RPA Results[3]
1	Antimony	4300	**0.6**	**1.8**	No
2	Arsenic	36	**45**	**2.46**	**Yes**
3	Beryllium	No Criteria	0.06	**0.215**	Undetermined
4	Cadmium	0.64	**0.6**	**0.1268**	No
5a	Chromium (III or Total)	110	**40**	Not Available	No
5b	Chromium (VI)	11.0	0.9	**4.4**	No
6	Copper	7.2	**20**	**2.55**	**Yes**
7	Lead	1.3	**2.6**	**0.804**	**Yes**
8	Mercury	0.025	**0.082**	**0.0086**	**Yes**
9	Nickel	30	**160**	**3.73**	**Yes**
10	Selenium	5.0	**26**	**0.39**	**Yes**
11	Silver	1.2	**0.03**	**0.052**	No
12	Thallium	6.3	**0.18**	**0.21**	No
13	Zinc	64	**220**	**5.1**	**Yes**
14	Cyanide	1.0	**4**	**0.4**	**Yes**
16	2,3,7,8-TCDD	1.4E-08	6.37E-07	Not Available	No
16-TEQ	Dioxin-TEQ	1.4E-08	**5.617E-08**	**7.1E-08**	**Yes**
17	Acrolein	780	0.56	0.5	No
18	Acrylonitrile	0.66	0.33	**0.03**	No
19	Benzene	71	**1.6**	0.05	No
20	Bromoform	360	0.07	0.5	No
21	Carbon Tetrachloride	4.4	0.06	**0.06**	No
22	Chlorobenzene	21000	0.06	0.5	No
23	Chlorodibromomethane	34	**1.9**	0.05	No
24	Chloroethane	No Criteria	0.07	0.5	Undetermined
25	2-Chloroethylvinyl Ether	No Criteria	0.1	0.5	Undetermined
26	Chloroform	No Criteria	**61**	0.5	Undetermined
27	Dichlorobromomethane	46	**17**	0.05	No

CTR #	Priority Pollutants (µg/L)	Governing WQO/WQC	MEC or Minimum DL	Maximum Background or Minimum DL[1, 2]	RPA Results[3]
28	1,1-Dichloroethane	No Criteria	0.05	0.05	Undetermined
29	1,2-Dichloroethane	99	0.06	**0.04**	No
30	1,1-Dichloroethylene	3.2	0.06	0.5	No
31	1,2-Dichloropropane	39	0.05	0.05	No
32	1,3-Dichloropropylene	1700	0.06	Not Available	No
33	Ethylbenzene	29000	0.06	0.5	No
34	Methyl Bromide	4000	0.05	0.5	No
35	Methyl Chloride	No Criteria	0.04	0.5	Undetermined
36	Methylene Chloride	1600	0.07	**0.5**	No
37	1,1,2,2-Tetrachloroethane	11	0.06	0.05	No
38	Tetrachloroethylene	8.85	0.06	0.05	No
39	Toluene	200000	**0.45**	0.3	No
40	1,2-Trans-Dichloroethylene	140000	0.05	0.5	No
41	1,1,1-Trichloroethane	No Criteria	0.06	0.5	Undetermined
42	1,1,2-Trichloroethane	42	0.07	0.05	No
43	Trichloroethylene	81	0.06	0.5	No
44	Vinyl Chloride	525	0.05	0.5	No
45	2-Chlorophenol	400	0.4	1.2	No
46	2,4-Dichlorophenol	790	0.3	1.3	No
47	2,4-Dimethylphenol	2300	0.3	1.3	No
48	2-Methyl-4,6-Dinitrophenol	765	0.4	1.2	No
49	2,4-Dinitrophenol	14000	0.3	0.7	No
50	2-Nitrophenol	No Criteria	0.3	1.3	Undetermined
51	4-Nitrophenol	No Criteria	0.2	1.6	Undetermined
52	3-Methyl-4-Chlorophenol	No Criteria	0.3	1.1	Undetermined
53	Pentachlorophenol	7.9	0.4	1	No
54	Phenol	4600000	0.2	1.3	No
55	2,4,6-Trichlorophenol	6.5	0.2	1.3	No
56	Acenaphthene	2700	0.031	**0.0015**	No
57	Acenaphthylene	No Criteria	0.02	**0.00053**	Undetermined
58	Anthracene	110000	0.031	**0.0005**	No
59	Benzidine	0.00054	0.3	0.0015	No
60	Benzo(a)Anthracene	0.049	0.02	**0.0053**	No
61	Benzo(a)Pyrene	0.049	0.02	**0.00029**	No
62	Benzo(b)Fluoranthene	0.049	0.031	**0.0046**	No
63	Benzo(ghi)Perylene	No Criteria	0.031	**0.0027**	Undetermined
64	Benzo(k)Fluoranthene	0.049	0.041	**0.0015**	No
65	Bis(2-Chloroethoxy)Methane	No Criteria	0.3	0.3	Undetermined
66	Bis(2-Chloroethyl)Ether	1.4	0.3	0.3	No
67	Bis(2-Chloroisopropyl)Ether	170000	0.6	Not Available	No
68	Bis(2-Ethylhexyl)Phthalate	5.9	**21**	0.5	**Yes**
69	4-Bromophenyl Phenyl Ether	No Criteria	0.4	0.23	Undetermined
70	Butylbenzyl Phthalate	5200	0.4	0.52	No
71	2-Chloronaphthalene	4300	0.3	0.3	No
72	4-Chlorophenyl Phenyl Ether	No Criteria	0.4	0.3	Undetermined
73	Chrysene	0.049	0.041	**0.0024**	No
74	Dibenzo(a,h)Anthracene	0.049	0.031	**0.00064**	No
75	1,2 Dichlorobenzene	17000	0.12	0.8	No
76	1,3 Dichlorobenzene	2600	0.16	0.8	No
77	1,4 Dichlorobenzene	2600	0.12	0.8	No

CTR #	Priority Pollutants (µg/L)	Governing WQO/WQC	MEC or Minimum DL	Maximum Background or Minimum DL[1, 2]	RPA Results[3]
78	3,3-Dichlorobenzidine	0.077	0.3	0.001	No
79	Diethyl Phthalate	120000	0.4	0.24	No
80	Dimethyl Phthalate	2900000	0.4	0.24	No
81	Di-n-Butyl Phthalate	12000	0.4	0.5	No
82	2,4-Dinitrotoluene	9.1	0.3	0.27	No
83	2,6-Dinitrotoluene	No Criteria	0.3	0.29	Undetermined
84	Di-n-Octyl Phthalate	No Criteria	0.4	0.38	Undetermined
85	1,2-Diphenylhydrazine	0.54	0.3	**0.0037**	No
86	Fluoranthene	370	0.03	**0.011**	No
87	Fluorene	14000	0.02	**0.00208**	No
88	Hexachlorobenzene	0.00077	0.4	**0.0000202**	No
89	Hexachlorobutadiene	50	0.2	0.3	No
90	Hexachlorocyclopentadiene	17000	0.1	0.31	No
91	Hexachloroethane	8.9	0.2	0.2	No
92	Indeno(1,2,3-cd) Pyrene	0.049	0.031	**0.004**	No
93	Isophorone	600	0.3	0.3	No
94	Naphthalene	No Criteria	0.02	**0.0023**	Undetermined
95	Nitrobenzene	1900	0.3	0.25	No
96	N-Nitrosodimethylamine	8.1	0.4	0.3	No
97	N-Nitrosodi-n-Propylamine	1.4	0.3	0.001	No
98	N-Nitrosodiphenylamine	16	0.4	0.001	No
99	Phenanthrene	No Criteria	0.03	**0.0061**	Undetermined
100	Pyrene	11000	0.03	**0.0051**	No
101	1,2,4-Trichlorobenzene	No Criteria	0.3	0.3	Undetermined
102	Aldrin	0.00014	0.003	Not Available	No
103	alpha-BHC	0.013	0.002	**0.000496**	No
104	beta-BHC	0.046	0.001	**0.000413**	No
105	gamma-BHC	0.063	0.001	**0.0007034**	No
106	delta-BHC	No Criteria	0.001	**0.000042**	Undetermined
107	Chlordane	0.00059	0.005	**0.00018**	No
108	4,4'-DDT	0.00059	0.001	**0.000066**	No
109	4,4'-DDE	0.00059	0.001	**0.000693**	No
110	4,4'-DDD	0.00084	0.001	**0.000313**	No
111	Dieldrin	0.00014	0.002	**0.000264**	No
112	alpha-Endosulfan	0.0087	0.002	**0.000031**	No
113	beta-Endosulfan	0.0087	0.001	**0.000069**	No
114	Endosulfan Sulfate	240	0.001	**0.0000819**	No
115	Endrin	0.0023	0.002	**0.000036**	No
116	Endrin Aldehyde	0.81	0.002	Not Available	Undetermined
117	Heptachlor	0.00021	0.003	**0.000019**	No
118	Heptachlor Epoxide	0.00011	0.002	**0.00002458**	No
119-125	PCBs sum	0.00017	0.031	Not Available	No
126	Toxaphene	0.0002	0.15	Not Available	Undetermined
	Tributylin	0.01	0.00044	0.001	No
	Total PAHs	15.0	0.02	**0.26**	No

[1] Concentration in bold is the actual detected maximum concentration, otherwise the concentration shown is the maximum detection level.
[2] Maximum Background = Not Available, if there is not monitoring data for this constituent.
[3] RPA Results = Yes, if MEC > WQO/WQC,
= No, if MEC or all effluent concentration non-detect < WQO/WQC,
= Undetermined, if no objective promulgated, and
= Cannot be determined due to lack of data.

Table F-19. RPA Summary (002)

CTR #	Priority Pollutants (µg/L)	Governing WQO/WQC	MEC or Minimum DL[1]	Maximum Background or Minimum DL[1, 2]	RPA Results[3]
1	Antimony	4300	**0.7**	**1.8**	No
2	Arsenic	36	**1.7**	**2.46**	No
3	Beryllium	No Criteria	0.06	**0.215**	Undetermined
4	Cadmium	0.64	**0.2**	**0.1268**	No
5a	Chromium (III or Total)	113	**9.8**	Not Available	No
5b	Chromium (VI)	11.4	0.9	**4.4**	No
6	Copper	7.16	**13**	**2.55**	**Yes**
7	Lead	1.25	**2.8**	**0.804**	**Yes**
8	Mercury	0.025	**0.98**	**0.0086**	**Yes**
9	Nickel	30.4	**13**	**3.73**	No
10	Selenium	5.0	**2**	**0.39**	No
11	Silver	1.15	**0.2**	**0.052**	No
12	Thallium	6.3	**0.095**	**0.21**	No
13	Zinc	64.3	**30**	**5.1**	No
14	Cyanide	1.0	**19**	0.4	**Yes**
16	2,3,7,8-TCDD	1.4×10^{-8}	6.37×10^{-7}	Not Available	No
16-TEQ	Dioxin-TEQ	1.4×10^{-8}	**2.23×10^{-7}**	**7.1×10^{-8}**	**Yes**
17	Acrolein	780	1	0.5	No
18	Acrylonitrile	0.66	1	**0.03**	No
19	Benzene	71	0.27	0.05	No
20	Bromoform	360	**0.9**	0.5	No
21	Carbon Tetrachloride	4.4	0.42	**0.06**	No
22	Chlorobenzene	21000	0.19	0.5	No
23	Chlorodibromomethane	34	**16**	0.05	No
24	Chloroethane	No Criteria	0.34	0.5	Undetermined
25	2-Chloroethylvinyl Ether	No Criteria	0.31	0.5	Undetermined
26	Chloroform	No Criteria	**210**	0.5	Undetermined
27	Dichlorobromomethane	46	**28**	0.05	No
28	1,1-Dichloroethane	No Criteria	0.28	0.05	Undetermined
29	1,2-Dichloroethane	99	0.18	**0.04**	No
30	1,1-Dichloroethylene	3.2	0.37	0.5	No
31	1,2-Dichloropropane	39	0.2	0.05	No
32	1,3-Dichloropropylene	1700	0.2	Not Available	No
33	Ethylbenzene	29000	0.3	0.5	No
34	Methyl Bromide	4000	0.42	0.5	No
35	Methyl Chloride	No Criteria	**1.0**	0.5	Undetermined
36	Methylene Chloride	1600	0.38	**0.5**	No
37	1,1,2,2-Tetrachloroethane	11	0.3	0.05	No
38	Tetrachloroethylene	8.85	0.32	0.05	No
39	Toluene	200000	0.25	0.3	No
40	1,2-Trans-Dichloroethylene	140000	0.3	0.5	No
41	1,1,1-Trichloroethane	No Criteria	0.35	0.5	Undetermined
42	1,1,2-Trichloroethane	42	0.27	0.05	No
43	Trichloroethylene	81	0.29	0.5	No
44	Vinyl Chloride	525	0.34	0.5	No
45	2-Chlorophenol	400	0.4	1.2	No
46	2,4-Dichlorophenol	790	0.3	1.3	No
47	2,4-Dimethylphenol	2300	0.3	1.3	No

CTR #	Priority Pollutants (µg/L)	Governing WQO/WQC	MEC or Minimum DL[1]	Maximum Background or Minimum DL[1, 2]	RPA Results[3]
48	2-Methyl-4,6-Dinitrophenol	765	0.4	1.2	No
49	2,4-Dinitrophenol	14000	0.3	0.7	No
50	2-Nitrophenol	No Criteria	0.3	1.3	Undetermined
51	4-Nitrophenol	No Criteria	0.2	1.6	Undetermined
52	3-Methyl-4-Chlorophenol	No Criteria	0.3	1.1	Undetermined
53	Pentachlorophenol	7.9	0.4	1	No
54	Phenol	4600000	**6.0**	1.3	No
55	2,4,6-Trichlorophenol	6.5	0.2	1.3	No
56	Acenaphthene	2700	0.17	**0.0019**	No
57	Acenaphthylene	No Criteria	0.03	**0.00053**	Undetermined
58	Anthracene	110000	0.16	**0.0005**	No
59	Benzidine	0.00054	0.3	0.0015	No
60	Benzo(a)Anthracene	0.049	0.12	**0.0053**	No
61	Benzo(a)Pyrene	0.049	0.09	**0.00029**	No
62	Benzo(b)Fluoranthene	0.049	0.11	**0.0046**	No
63	Benzo(ghi)Perylene	No Criteria	0.06	**0.0027**	Undetermined
64	Benzo(k)Fluoranthene	0.049	0.16	**0.0015**	No
65	Bis(2-Chloroethoxy)Methane	No Criteria	0.3	0.3	Undetermined
66	Bis(2-Chloroethyl)Ether	1.4	0.3	0.3	No
67	Bis(2-Chloroisopropyl)Ether	170000	0.6	Not Available	No
68	Bis(2-Ethylhexyl)Phthalate	5.9	**17**	0.5	Yes
69	4-Bromophenyl Phenyl Ether	No Criteria	0.4	0.23	Undetermined
70	Butylbenzyl Phthalate	5200	0.4	0.52	No
71	2-Chloronaphthalene	4300	0.3	0.3	No
72	4-Chlorophenyl Phenyl Ether	No Criteria	0.4	0.3	Undetermined
73	Chrysene	0.049	0.14	**0.0024**	No
74	Dibenzo(a,h)Anthracene	0.049	0.04	**0.00064**	No
75	1,2 Dichlorobenzene	17000	0.112	0.8	No
76	1,3 Dichlorobenzene	2600	0.16	0.8	No
77	1,4 Dichlorobenzene	2600	0.3	0.8	No
78	3,3-Dichlorobenzidine	0.077	0.3	0.001	No
79	Diethyl Phthalate	120000	0.4	0.24	No
80	Dimethyl Phthalate	2900000	0.4	0.24	No
81	Di-n-Butyl Phthalate	12000	0.4	0.5	No
82	2,4-Dinitrotoluene	9.1	0.3	0.27	No
83	2,6-Dinitrotoluene	No Criteria	0.3	0.29	Undetermined
84	Di-n-Octyl Phthalate	No Criteria	0.4	0.38	Undetermined
85	1,2-Diphenylhydrazine	0.54	0.3	**0.0037**	No
86	Fluoranthene	370	0.03	**0.011**	No
87	Fluorene	14000	0.02	**0.00208**	No
88	Hexachlorobenzene	0.00077	0.4	**0.0000202**	No
89	Hexachlorobutadiene	50	0.2	0.3	No
90	Hexachlorocyclopentadiene	17000	0.1	0.31	No
91	Hexachloroethane	8.9	0.2	0.2	No
92	Indeno(1,2,3-cd) Pyrene	0.049	0.04	**0.004**	No
93	Isophorone	600	0.3	0.3	No
94	Naphthalene	No Criteria	0.05	**0.0023**	Undetermined
95	Nitrobenzene	1900	0.3	0.25	No
96	N-Nitrosodimethylamine	8.1	0.4	0.3	No
97	N-Nitrosodi-n-Propylamine	1.4	0.3	0.001	No

CTR #	Priority Pollutants (µg/L)	Governing WQO/WQC	MEC or Minimum DL[1]	Maximum Background or Minimum DL[1, 2]	RPA Results[3]
98	N-Nitrosodiphenylamine	16	0.4	0.001	No
99	Phenanthrene	No Criteria	0.03	**0.0061**	Undetermined
100	Pyrene	11000	0.03	**0.0051**	No
101	1,2,4-Trichlorobenzene	No Criteria	0.3	0.3	Undetermined
102	Aldrin	0.00014	0.003	Not Available	No
103	alpha-BHC	0.013	0.002	**0.000496**	No
104	beta-BHC	0.046	0.001	**0.000413**	No
105	gamma-BHC	0.063	0.001	**0.0007034**	No
106	delta-BHC	No Criteria	0.001	**0.000042**	Undetermined
107	Chlordane	0.00059	0.005	**0.00018**	No
108	4,4'-DDT	0.00059	0.001	**0.000066**	No
109	4,4'-DDE	0.00059	0.001	**0.000693**	No
110	4,4'-DDD	0.00084	0.001	**0.000313**	No
111	Dieldrin	0.00014	0.002	**0.000264**	No
112	alpha-Endosulfan	0.0087	0.002	**0.000031**	No
113	beta-Endosulfan	0.0087	0.001	**0.000069**	No
114	Endosulfan Sulfate	240	0.001	**0.0000819**	No
115	Endrin	0.0023	0.002	**0.000036**	No
116	Endrin Aldehyde	0.81	0.002	Not Available	No
117	Heptachlor	0.00021	0.003	**0.000019**	No
118	Heptachlor Epoxide	0.00011	0.002	**0.00002458**	No
119-125	PCBs sum	0.00017	0.03	Not Available	No
126	Toxaphene	0.0002	0.2	Not Available	No
	Tributylin	0.01	0.000465	0.001	No
	Total PAHs	15.0	0.02	**0.26**	No

[1] Concentration in bold is the actual detected maximum concentration, otherwise the concentration shown is the maximum detection level.
[2] Maximum Background = Not Available, if there is not monitoring data for this constituent.
[3] RPA Results = Yes, if MEC > WQO/WQC,
= No, if MEC or all effluent concentration non-detect < WQO/WQC,
= Undetermined, if no objective promulgated, and
= Cannot be determined due to lack of data.

e. **Constituents with limited data**. The Discharger has performed sampling and analysis for the constituents listed in the CTR. This data set was used to perform the RPA. In some cases, Reasonable Potential cannot be determined because effluent data are limited, or ambient background concentrations are not available. The Discharger will continue to monitor for these constituents in the effluent using analytical methods that provide the best feasible detection limits. When additional data become available, further RPA will be conducted to determine whether to add numeric effluent limitations to this Order or to continue monitoring.

f. **Pollutants with no Reasonable Potential.** WQBELs are not included in this Order for constituents that do not demonstrate Reasonable Potential; however, monitoring for those pollutants is still required. If concentrations of these constituents are found to have increased significantly, the Discharger will be required to investigate the source(s) of the increase(s). Remedial measures are required if the increases pose a threat to water quality in the receiving water.

4. WQBEL Calculations.

a. Applicable WQC/WQOs for Pollutants with Reasonable Potential.

WQBELs were developed for the toxic and priority pollutants that were determined to have reasonable potential to cause or contribute to exceedances of the WQOs or WQC. The WQOs or WQC used for each pollutant with Reasonable Potential and the basis for the WQOs/WQC is indicated in the following table.

Table F-20. Water Quality Criteria/Objectives for Toxics

Pollutant	Water Quality Criterion or Objective (µg/L)			Basis
	Aquatic Life Chronic	Aquatic Life Acute	Human Health	
Arsenic	36	69	---	Basin Plan (salt water aquatic life)
Copper	8.2	7.2	---	CTR (salt water aquatic life) converted to total with site-specific translators for the Bay) – for RPA purpose
Copper	20	17	---	CTR (salt water aquatic life) converted to total with site-specific translators and a WER for the Bay) – for WQBEL calculation
Copper	16	14	---	Proposed site-specific objectives and a WER for the Bay – for alternate WQBEL calculation
Lead	1.2	32	---	Basin Plan (fresh water aquatic life)
Mercury	0.025	2.1	0.051	Basin Plan (salt water aquatic life)
Nickel	30	130	4600	Basin Plan (salt water aquatic life)
Selenium	5.0	20	---	NTR criteria for the Bay
Zinc	64	64	---	Basin Plan (fresh water aquatic life)
Cyanide	1.0	1.0	220000	NTR criteria for the Bay
Cyanide	2.9	9.4	---	Proposed site-specific objectives for the Bay
Dioxin-TEQ	---	---	1.4×10^{-8}	Basin Plan narrative
Bis (2-ethylhexyl) phthalate	---	---	5.9	CTR Human Health

b. Dilution Credit

The SIP provides the basis for the dilution credit granted. The C&H Sugar Company Outfalls 001 and 002 are designed to achieve a minimum of 10:1 dilution. Review of RMP data (local and North Bay stations) reveals variability in the receiving water, and the hydrology of the receiving water is very complex. Therefore, there is uncertainty associated with the representative nature of the appropriate ambient background data for effluent limit calculations. Pursuant to Section 1.4.2.1 of the SIP, "dilution credit may be limited or denied on a pollutant-by-pollutant basis…." The Regional Water Board finds that a conservative 10:1 dilution credit for non-bioaccumulative priority pollutants and a zero dilution credit for bioaccumulative priority pollutants are necessary for protection of beneficial uses. The detailed basis for each are explained below.

(1) For certain bioaccumulative pollutants, based on BPJ, dilution credit is not included in calculating the final WQBELs. This determination is based on available data on concentrations of these pollutants in aquatic organisms, sediment, and the water column. The Regional Water Board placed selenium, mercury, and polychlorinated biphenyls (PCBs) on the CWA Section 303(d) list. U.S. EPA added dioxin and furan compounds, chlordane, dieldrin, and 4,4'-DDT to the CWA Section 303(d) list. Dilution credit is not included for mercury. The following factors suggest that there is no more assimilative capacity in the Bay for these pollutants.

San Francisco Bay fish tissue data show that these pollutants exceed screening levels. The fish tissue data are contained in *Contaminant Concentrations in Fish from San Francisco Bay 1997* (May 1997). Denial of dilution credits for these pollutants is further justified by fish advisories for San Francisco Bay. The Office of Environmental Health and Hazard Assessment (OEHHA) performed a preliminary review of the data from the 1994 San Francisco Bay pilot study, *Contaminated Levels in Fish Tissue from San Francisco Bay*. The results of the study showed elevated levels of chemical contaminants in the fish tissues. Based on these results, OEHHA issued an interim consumption advisory covering certain fish species from the Bay in December 1994. This interim consumption advice was issued and is still in effect owing to health concerns based on exposure to sport fish from the Bay contaminated with mercury, dioxins, and pesticides (e.g., DDT).

For selenium, the denial of dilution credits is based on Bay waterfowl tissue data presented in the California Department of Fish and Game's Selenium Verification Study (1986-1990). These data show elevated levels of selenium in the livers of waterfowl that feed on bottom dwelling organisms such as clams. Additionally, in 1987 the Office of Environmental Health Hazard Assessment issued an advisory for the consumption of two species of diving ducks in the North Bay found to have high tissue levels of selenium. This advisory is still in effect.

(2) Furthermore, Section 2.1.1 of the SIP states that for bioaccumulative compounds on the 303(d) list, the Regional Water Board should consider whether mass-loading limits should be limited to current levels. The Regional Water Board finds that mass-loading limits are warranted for mercury for the receiving waters of this Discharger. This is to ensure that this Discharger does not contribute further to impairment of the narrative objective for bioaccumulation.

(3) For non-bioaccumulative constituents, a conservative allowance of 10:1 dilution for discharges to the Bay has been assigned for protection of beneficial uses. The basis for using 10:1 is that it was granted in the previous permit. This 10:1 is also based on the Basin Plan's prohibition number 1, which prohibits discharges with less than 10:1 dilution. Limiting the dilution

credit is based on SIP provisions in Section 1.4.2. The following outlines the basis for derivation of the dilution credit.

i. A far-field background station is appropriate because the receiving water body (the Bay) is a very complex estuarine system with highly variable and seasonal upstream freshwater inflows and diurnal tidal saltwater inputs. The SIP allows background to be determined on a discharge-by-discharge or water body-by-water body basis (SIP 1.4.3). Consistent with the SIP, Regional Water Board staff has chosen to use a water body-by-water body basis because of the uncertainties inherent in accurately characterizing ambient background in a complex estuarine system on a discharge-by-discharge basis.

   The Yerba Buena Island Station fits the guidance for ambient background in the SIP compared to other stations in the RMP. The SIP states that background data are applicable if they are "representative of the ambient receiving water column that will mix with the discharge." Regional Water Board staff believes that data from this station are representative of water that will mix with the discharge from 001 and 002. Although this station is located near the Golden Gate, it would represent the typical water flushing in and out of the Bay each tidal cycle. For most of the Bay, the waters represented by this station make up a large part of the receiving water the will mix with the discharge.

ii. Because of the complex hydrology of the San Pablo Bay, a mixing zone has not been established. There are uncertainties in accurately determining the mixing zones for each discharge. The models that have been used to predict dilution have not considered the three-dimensional nature of the currents in the estuary resulting from the interaction of tidal flushes and seasonal fresh water outflows. Salt water is heavier than fresh water, colder saltwater from the ocean flushes in twice a day generally under the warmer fresh river waters that flow out annually. When these waters mix and interact, complex circulation patterns occur due to the different densities of these waters. These complex patterns occur throughout the estuary but are most prevalent in the San Pablo, Carquinez Strait, and Suisun Bay areas. The locations change depending on the strength of each tide and the variable rate of delta outflow. Additionally, sediment loads to the bay from the Central Valley also change on a longer-term basis. These changes can result in changes to the depths of different parts of the Bay making some areas more shallow and/or other areas more deep. These changes affect flow patterns that in turn can affect the initial dilution achieved by a diffuser.

iii. The SIP allows limiting a mixing zone and dilution credit for persistent pollutants (e.g., copper, silver, nickel, and lead). Discharges to the bay are defined in the SIP as incompletely mixed discharges. Thus, dilution credit should be determined using site-specific information. The SIP 1.4.2.2 specifies that the Regional Water Board "significantly limit a mixing zone

and dilution credit as necessary… For example, in determining the extent of a mixing zone or dilution credit, the RWQCB shall consider the presence os pollutants in the discharge that are …persistent." The SIP defines persistent pollutants to be "substances for which degradation or decomposition in the environment is nonexistent or very slow." The pollutants at issue here are persistent pollutants (e.g. copper). The dilution studies that estimate actual dilution do not address the effects of these persistent pollutants in the Bay environment, such as their long-term effects on sediment concentrations.

c. Final Effluent Limitation Calculations.

The following tables summarize the WQBELs calculated for each toxic and priority pollutants that were determined to have reasonable potential to cause or contribute to exceedances of the WQOs or WQC. The WQBELs were calculated based on appropriate WQOs/WQC and the appropriate procedures specified in Section 1.4 of the SIP, as shown in **Attachment F-3** of this Fact Sheet.

Table F-21. Final WQBELs for Toxics (Discharge Point 001)

Pollutants	Units	AMEL	MDEL
Arsenic	µg/L	290	510
Copper	µg/L	96	150
Copper (alternate Limits)	µg/L	76	120
Lead	µg/L	3.7	8.3
Mercury	µg/L	0.018	0.046
Nickel	µg/L	200	480
Selenium	µg/L	3.9	8.7
Zinc	µg/L	250	590
Cyanide	µg/L	3.2	6.4
Cyanide (alternate limits)	µg/L	21	42
Dioxin - TEQ	µg/L	1.4×10^{-8}	2.8×10^{-8}
Bis (2-ethylhexy) phthalate	µg/L	54	110

Table F-22. Final WQBELs for Toxics (Discharge Point 002)

Pollutants	Units	AMEL	MDEL
Copper	µg/L	88	150
Copper (alternate Limits)	µg/L	70	120
Lead	µg/L	3.6	9.7
Mercury	µg/L	0.012	0.038
Cyanide	µg/L	2.9	6.4
Cyanide (alternate limits)	µg/L	20	44
Dioxin – TEQ	µg/L	1.4×10^{-8}	2.8×10^{-8}
Bis (2-ethylhexy) phthalate	µg/L	54	110

d. Development of Effluent Limitations for Specific Pollutants – Outfalls 001 and 002

(1) **Arsenic.**

i. **Arsenic WQOs.** The most stringent water quality objectives/criteria for arsenic, applicable to discharges from the C&H Sugar Company facility, are 36 and 69 µg/L – chronic and acute, respectively, from the Basin Plan and CTR for the protection of saltwater aquatic life.

ii. **RPA Results.** From January 2002 – July 2004, the maximum observed effluent concentration (MEC) of arsenic was 45 µg/L at Discharge Point 001. Because the MEC at Discharge Point 001 exceeds the most stringent applicable objective/criterion of 36 µg/L, there is reasonable potential for discharges from Discharge Point 001 to cause or contribute to exceedances of applicable WQOs/WQC (trigger 1), and this Order establishes effluent limitations for arsenic for that outfall.

iii. **Arsenic WQBELs.** The arsenic WQBELs calculated according to SIP procedures are 510 µg/L as the maximum daily effluent limit (MDEL) and 290 µg/L as the average monthly effluent limit (AMEL) for Discharge Point 001. A dilution credit of 10:1 was incorporated into the calculation of WQBELs.

iv. **Plant Performance and Attainability.** During the period January 2002 through July 2004, the Discharger's effluent concentrations were in the range of 6 µg/L to 45 µg/L (32 samples). A statistical analysis shows that the Discharger can comply with these final effluent limitations.

v. **Antibacksliding.** The previous permit did not include effluent limitations for arsenic; therefore, the new limits are more stringent than the previous ones, which is consistent with antibacksliding requirements.

(2) **Copper.**

i. **Copper WQC.** The marine chronic and acute criteria for dissolved copper adopted in the CTR and Basin Plan are defined as 3.1 and 4.8 µg/L multiplied by a water effects ratio or WER (40 CFR 131.38 (b) and (c)(4)(i) and (iii)). The default value for the WER is 1.0 unless a WER has been developed as set forth in USEPA's WER guidance (Interim Guidance on Determination and Use of Water Effect Ratios, USEPA Office of Water, EPA-823-B-94-001, February 1994). WERs have been developed for San Francisco Bay in accordance with this USEPA guidance as documented in *North of Dumbarton Bridge Copper and Nickel Site-Specific Objective (SSO) Derivation (Clean Estuary Partnership December 2004.* The most recent document is *Copper Site-Specific Objectives in San Francisco Bay, Proposed Basin Plan Amendment and Draft Staff Report, dated March 2,*

2007). Based on the data in these reports, a WER of 2.4 is appropriate for this discharge. In addition, Regional Water Board developed copper site-specific translators along with the study using RMP data for San Pablo Bay. The translators are 0.38 and 0.67 for converting chronic and acute dissolved WQC into total WQC, respectively. The resulting adjusted WQC for this discharge are 20 μg/L for chronic protection and 17 μg/L for acute protection, and are used in WQBELs calculation. However, when determining reasonable potential, a WER value of 1.0 is still used, the resulting WQC as 8.2 μg/L for chronic protection and 7.2 μg/L for acute protection are used in RPA.

ii. **RPA Results.** From January 2002 through December 2005, maximum observed effluent concentrations (MECs) of copper were 20 and 13 µg/L at Discharge Points 001 and 002, respectively. Because the MECs at Discharge Points 001 and 002 both exceed the most stringent applicable criterion of 7.2 µg/L, there is reasonable potential for discharges from both outfalls to cause or contribute to exceedances of applicable WQC (trigger 1), and this Order, therefore, establishes effluent limitations for copper for Discharge Points 001 and 002.

iii. **Copper WQBELs.** The copper WQBELs calculated according to SIP procedures are: for Discharge Point 001 – 150 μg/L as the maximum daily effluent limit (MDEL) and 96 μg/L as the average monthly effluent limit (AMEL); for Discharge Point 002 – 150 μg/L as MDEL and 88 μg/L as AMEL. A dilution credit of 10:1 was incorporated into the calculation of WQBELs.

iv. **Plant Performance and Attainability.** During the period January 2002 through December 2005, the Discharger's effluent concentrations were in the range of 6 μg/L to 20 μg/L for 001 (32 samples), and 2.3 μg/L to 13 μg/L for 002 (50 samples). A statistical analysis shows that the Discharger can comply with these final effluent limitations.

v. **Copper SSO and Alternate WQBELs**. During the permit term, the Regional Water Board may amend the copper WQBELs based on the SSO being developed for the San Francisco Bay as depicted in the documents cited in subsection a. above. The site specific objectives proposed are 6.0 μg/L as a four-day average and 9.4 μg/L as a one-hour average, expressed as dissolved metal. Using the site-specific translators, 0.38 and 0.67 for converting chronic and acute dissolved WQC into total WQC, respectively, the resulting WQOs are 16 μg/L for chronic protection and 14 μg/L for acute protection. Based on the Discharger's current copper data (coefficient of variation of 0.32 and 0.40 for Discharges 001 and 002, respectively), the alternate WQBELs for copper will be 120 μg/L as an MDEL and 76 μg/L as an AMEL for Discharge 001; and 120 μg/L as an MDEL and 70 μg/L as an AMEL for Discharge 002. These alternative limits will become effective only if the

site-specific objective adopted contains the same assumptions in the report cited in subsection a. above.

vi. **Antibacksliding.** The previous permit included an interim effluent limit of 37 µg/L as a daily maximum for Discharge 002. Antibacksliding does not apply to interim limits and since there were no final WQBELs in the previous permit to which to compare the new final WQBELs, there is no backsliding. There was no effluent limit in the previous permit for Discharge 001; therefore, the new limits are more stringent than the previous ones, which is consistent with antibacksliding requirements.

(3) **Lead.**

i. **Lead WQOs/WQC.** The most stringent applicable water quality objectives/criteria for lead, applicable to discharges from the C&H Sugar Company facility, are 1.3 and 32 µg/L – chronic and acute, respectively, from the Basin Plan and the CTR for the protection of fresh water aquatic life. As fresh water aquatic life objectives/criteria from the Basin Plan and the CTR are hardness dependent (i.e., toxicity of lead in fresh water increases with decreasing hardness), these specific objectives/criteria are based on a receiving water hardness of 48 mg/L $CaCO_3$, which is the lowest hardness concentration observed at the RMP Davis Point and Napa River Monitoring Stations. The Regional Water Board typically uses hardness data from the closest RMP monitoring station and/or site-specific data, if it is available. When sufficient data exist to do statistical analyses, Regional Water Board staff use a background receiving water hardness figure that is an adjusted geometric mean - the value that is greater than 30 percent of the data points. When hardness data are limited, as in these circumstances, Regional Water Board staff use the minimum hardness value to determine fresh water objectives/criteria for lead.

ii. **RPA Results.** From January 2002 through December 2005, maximum observed effluent concentrations (MECs) of lead were 2.6 and 2.8 µg/L at Discharge Points 001 and 002, respectively. Because the MECs at both outfalls exceed the most stringent applicable objective/criterion of 1.3 µg/L, there is reasonable potential for discharges from Discharge Points 001 and 002 to cause or contribute to exceedances of applicable WQOs/WQC (trigger 1), and this Order establishes effluent limitations for lead for Discharge Points 001 and 002.

iii. **Lead WQBELs.** The lead WQBELs calculated according to SIP procedures are: for Discharge Point 001 – 8.3 µg/L as the maximum daily effluent limit (MDEL) and 3.7 µg/L as the average monthly effluent limit (AMEL); for Discharge Point 002 – 9.7 µg/L as MDEL and 3.6 µg/L as AMEL. A dilution credit of 10:1 was incorporated into the calculation of WQBELs.

iv. **Plant Performance and Attainability.** During the period January 2002 through December 2005, the Discharger's effluent concentrations were in the range of <0.02 μg/L to 2.6 μg/L for Discharge 001 (32 samples), and 0.13 μg/L to 2.8 μg/L (50 samples) for Discharge 002. A statistical analysis shows that the Discharger can comply with these final effluent limitations.

v. **Antibacksliding.** The previous permit included a final MDEL of 50.3 µg/L for Discharge 002. The new limits are more stringent than this previous permit limit. Therefore, antibacksliding requirements are satisfied. There was no effluent limit in the previous permit for Discharge 001; therefore, the new limits are more stringent than the previous ones, which is consistent with antibacksliding requirements.

(4) **Mercury.**

i. **Mercury WQOs/WQC.** Both the Basin Plan and the CTR include objectives and criteria that govern mercury in the receiving water. The Basin Plan specifies objectives for the protection of saltwater aquatic life of 0.025 µg/L as a 4-day average and 2.1 µg/L as a 1-hour average. The CTR specifies a long-term average criterion for protection of human health of 0.051 µg/L.

ii. **RPA Results.** From January 2002 through December 2005, maximum observed effluent concentrations (MECs) of mercury were 0.082 and 0.98 µg/L at Discharge Points 001 and 002, respectively. Because the MECs at both outfalls exceed the most stringent applicable objective of 0.025 µg/L, there is reasonable potential for discharges from Discharge Points 001 and 002 to cause or contribute to exceedances of applicable WQOs (trigger 1), and this Order establishes effluent limitations for mercury for both outfalls.

iii. **Mercury WQBELs.** The mercury WQBELs calculated according to SIP procedures are: for Discharge Point 001 – 0.046 μg/L as the maximum daily effluent limit (MDEL) and 0.018 μg/L as the average monthly effluent limit (AMEL); for Discharge Point 002 – 0.038 μg/L as MDEL and 0.012 μg/L as AMEL. Although discharges from Discharge Points 001 and 002 are viewed as deep water discharges pursuant to the Basin Plan, these final effluent limitations are not based on a minimum initial dilution of 10 to 1, as typically provided to deep water discharges. Mercury is a bioaccumulative pollutant, and therefore credit for dilution cannot be justified in developing effluent limitations.

iv. **Plant Performance and Attainability.** During the period January 2002 through December 2005, the Discharger's effluent concentrations were in the range of 0.0031 μg/L to 0.082 μg/L for Discharge 001 (32 samples), and 0.0009 μg/L to 0.98 μg/L (50 samples) for Discharge 002. Both the MECs exceed the AMELs, respectively. As detailed in a section below, it

is infeasible for the Discharger to comply with the final WQBELs; therefore, interim effluent limitations are established.

v. **Mercury Control Strategy.** The Regional Water Board is developing a TMDL to control mercury levels in San Francisco Bay. The Regional Water Board, together with other stakeholders, will cooperatively develop source control strategies as part of the TMDL development. Municipal discharge point sources do not represent a significant mercury loading to San Francisco Bay. Therefore, the currently preferred strategy is to apply interim mass loading limits to point source discharges while focusing mass reduction efforts on other more significant and controllable sources. While the TMDL is being developed, the Discharger will cooperate in maintaining ambient receiving water conditions by complying with performance-based mercury mass emission limits. Therefore, this Order includes interim mass loading effluent limitations for mercury, as described in the fact sheet below. The Discharger is required to implement source control measures and cooperatively participate in special studies as described below.

vi. **Mercury TMDL.** The current 303(d) list includes the San Francisco Bay as impaired by mercury due to high mercury concentrations in the tissues of fish from the Bay. Methylmercury, a highly toxic for of mercury, is a persistent bioaccumulative pollutant. There is no evidence to show that mercury discharged by the Discharger is taken out of the hydrologic system by processes such as evaporation before reaching San Francisco Bay. The Regional Water Board intends to establish a TMDL that will lead toward overall reduction of mercury mass loadings into San Francisco Bay. The final mercury effluent limitations will be based on the Discharger's WLA in the TMDL. While the TMDL is being developed, the Discharger will comply with performance-based mercury concentration and mass-based limitations to cooperate with maintaining current ambient receiving water conditions.

vii. **Antibacksliding.** The previous permit did not specify final WQBELs for mercury and only contained interim effluent limitations for Discharge 002, which were 1 μg/L as a daily maximum, and 0.21 μg/L as a monthly average limit. Antibacksliding does not apply to interim limits and since there were no final WQBELs in the previous permit to which to compare the new WQBELs, there is no backsliding. Nevertheless, the new limits for Discharge 002 are more stringent than the previous interim limits, which is consistent with antibacksliding requirements.

(5) **Nickel.**

i. **Nickel WQOs/WQC.** The most stringent applicable WQOs/WQC for nickel, applicable to discharges from the C&H Sugar Company facility, are 30 and 130 µg/L - chronic and acute, respectively, from the Basin Plan and the CTR for the protection of saltwater aquatic life. Because the

Basin Plan and CTR express the saltwater aquatic life objectives/criteria for nickel as dissolved metal, these specific objectives/criteria (30 and 130 µg/L), which are expressed as total recoverable metal, were derived using site specific translators of 0.27 (chronic) and 0.57 (acute), as recommended by the Clean Estuary Partnership's *North of Dumbarton Bridge Copper and Nickel Development and Selection of Final Translators* (2005).

ii. **RPA Results.** From January 2002 – December 2005, maximum observed effluent concentrations (MECs) of nickel were 160 and 13 µg/L at Discharge Points 001 and 002, respectively. Because the MEC at Discharge Point 001 exceeds the most stringent applicable WQO of 30 µg/L, there is reasonable potential for discharges from Discharge Point 001 to cause or contribute to exceedances of applicable WQOs/WQC (trigger 1), and this Order, therefore, establishes effluent limitations for nickel for Discharge Point 001.

iii. **Nickel WQBELs.** The nickel WQBELs calculated according to SIP procedures are 480 µg/L as the maximum daily effluent limit (MDEL) and 200 µg/L as the average monthly effluent limit (AMEL) for Discharge Point 001. A dilution credit of 10:1 was incorporated into the calculation of WQBELs.

iv. **Plant Performance and Attainability.** During the period January 2002 through July 2004, the Discharger's effluent concentrations were in the range of 10 µg/L to 160 µg/L for Discharge 001 (32 samples). A statistical analysis shows that the Discharger can comply with these final effluent limitations.

v. **Antibacksliding.** Although the previous permit included an interim daily maximum effluent limitation for nickel at Discharge Point 002 of 53 µg/L, there is no WQBEL for Discharge Point 002 because there is no reasonable potential from this discharge. Therefore, antibacksliding requirements are satisfied. There was no effluent limit in the previous permit for Discharge 001; therefore, the new limits are more stringent than the previous ones, which is consistent with antibacksliding requirements.

(6) **Selenium.**

i. **Selenium WQC.** The most stringent applicable water quality criteria for selenium, applicable to discharges from the C&H Sugar Company facility, are 5 and 20 µg/L, from the NTR for the protection of chronic and acute aquatic life in San Francisco Bay.

ii. **RPA Results.** From January 2002 – December 2005, maximum observed effluent concentrations (MECs) of selenium were 26 and 2.0 µg/L at Discharge Points 001 and 002, respectively. Because the MEC at Discharge Point 001 exceeds the most stringent applicable criterion of

5.0 µg/L, there is reasonable potential for discharges from Discharge Point 001 to cause or contribute to exceedances of applicable WQC (trigger 1), and this Order, therefore, establishes effluent limitations for selenium for Discharge Point 001.

iii. **Selenium WQBELs.** The selenium WQBELs calculated according to SIP procedures are 8.7 µg/L as the maximum daily effluent limit (MDEL) and 3.9 µg/L as the average monthly effluent limit (AMEL) for Discharge Point 001. Selenium is a bioaccumulative pollutant, and therefore credit for dilution cannot be justified in developing effluent limitations.

iv. **Plant Performance and Attainability.** During the period January 2002 through July 2005, the Discharger's effluent concentrations were in the range of <0.5 µg/L to 26 µg/L for Discharge 001 (32 samples). The Discharger's Infeasibility Analysis asserts the Discharger cannot immediately comply with these WQBELs for selenium. A statistical analysis was conducted on the Discharger's effluent data from January 2002 through December 2005. Based on the analysis, the Regional Water Board concurs with the Discharger's assertion of infeasibility to comply with final selenium WQBELs.

v. **Antibacksliding.** The previous permit did not include an effluent limitation for selenium at either discharge; therefore, the new limits are more stringent than the previous ones, which is consistent with antibacksliding requirements.

(7) **Zinc.**

i. **Zinc WQOs/WQC.** The most stringent applicable WQOs/WQC for zinc applicable to discharges from the C&H Sugar Company facility is 64 µg/L, which is both a chronic and an acute objective/criterion from the Basin Plan and the CTR for the protection of fresh water aquatic life. This WQO/WQC is calculated based on a hardness value of 48 mg/L as $CaCO_3$, which is the lowest hardness concentration observed at the RMP Davis Point and Napa River Monitoring Stations.

ii. **RPA Results.** From January 2002 through December 2005, maximum observed effluent concentrations (MECs) of zinc were 220 and 30 µg/L at Discharge Points 001 and 002, respectively. Because the MEC at Discharge Point 001 exceeds the most stringent applicable objective/criterion of 64 µg/L, there is reasonable potential for discharges from Discharge Point 001 to cause or contribute to exceedances of applicable WQOs/WQC (trigger 1), and this Order establishes effluent limitations for zinc for Discharge Point 001.

iii. **Zinc WQBELs.** The zinc WQBELs calculated according to SIP procedures are 590 µg/L as the maximum daily effluent limit (MDEL) and 250 µg/L as the average monthly effluent limit (AMEL) for Discharge Point

001. A dilution credit of 10:1 was incorporated into the calculation of WQBELs.

iv. **Plant Performance and Attainability.** During the period January 2002 through July 2004, the Discharger's effluent concentrations were in the range of 4 μg/L to 220 μg/L for Discharge 001 (32 samples). Due to lack of appropriate distribution fit to the effluent data, a statistical analysis cannot be performed, however, the MEC does not exceed the AMEL; therefore, it is expected that the Discharger can comply with these final effluent limitations.

v. **Antibacksliding.** The previous permit did not include an effluent limit for either discharge; therefore, the new limits are more stringent than the previous ones, which is consistent with antibacksliding requirements.

(8) **Cyanide.**

i. **Cyanide WQC.** The most stringent applicable water quality criterion for cyanide applicable to discharges from the C&H Sugar Company facility is 1.0 µg/L, which is both a chronic and an acute criterion from the NTR for the protection of aquatic life in San Francisco Bay.

ii. **Cyanide RPA Results.** From January 2002 through December 2005, maximum observed effluent concentrations (MECs) of cyanide were 4.0 and 19 µg/L at Discharge Points 001 and 002, respectively. Because the MECs at both outfalls exceed the most stringent applicable criterion of 1.0 µg/L, there is reasonable potential for discharges from Discharge Points 001 and 002 to cause or contribute to exceedances of applicable WQC (trigger 1), and this Order establishes effluent limitations for cyanide for Discharge Points 001 and 002.

iii. **Cyanide WQBELs.** The cyanide WQBELs calculated according to SIP procedures are: for Discharge Point 001 – 6.4 μg/L as the maximum daily effluent limit (MDEL) and 3.2 μg/L as the average monthly effluent limit (AMEL); for Discharge Point 002 – 6.4 μg/L as MDEL and 2.9 μg/L as AMEL. A dilution credit of 10:1 was incorporated into the calculation of WQBELs.

iv. **Plant Performance and Attainability.** During the period January 2002 through December 2005, the Discharger's effluent concentrations were in the range of <0.6 μg/L to 4 μg/L (32 samples) for Discharge 001, and <9 μg/L to 19 μg/L for Discharge 002 (30 samples). The Discharger's Infeasibility Analysis asserts the Discharger cannot immediately comply with these WQBELs for cyanide. A direct comparison between the MEC and the AMEL for Discharge 001 and a statistical analysis of the effluent data from 002 were conducted, and the Regional Water Board concurs with the Discharger's assertion of infeasibility to comply with these final cyanide WQBELs.

v. **Alternate Effluent Limits for Cyanide.** The Regional Water Board adopted Resolution No. R2-2006-0086 in December 2006, to amend Basin Plan to adopt site-specific objectives for cyanide for San Francisco Bay. In this resolution, the cyanide site-specific criteria for marine waters are 2.9 μg/L as a four-day average, and 9.4 μg/L as a one-hour average. Based on the Discharger's current cyanide data (coefficient of variation of 0.60 for Discharge Point 001 and 0.71 for Discharge Point 002), final water quality based effluent limits for cyanide for 001 will be 42 μg/L as an MDEL and 21 μg/L as an AMEL; and for 002, 44 μg/L as MDEL and 20 μg/L as AMEL. These alternative limits will become effective after this Basin Plan amendment is approved by State Water Board, USEPA, and Office of Administrative Law.

vi. **Antibacksliding.** The previous permit did not include a cyanide effluent limit for either discharge; therefore, the new limits are more stringent than the previous ones, which is consistent with antibacksliding requirements.

(9) **Dioxin-TEQ.**

i. The Basin Plan contains a narrative WQO for bioaccumulative substances:

"Many pollutants can accumulate on particulates, in sediments, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered."

This narrative WQO applies to dioxin and furan compounds, based in part on the consensus of the scientific community that these compounds associate with particulates, accumulate in sediments, and bioaccumulate in the fatty tissue of fish and other organisms.

ii. The CTR establishes a numeric human health WQC of 0.014 picogram per liter (pg/L) for 2,3,7,8-tetrachlorinated dibenzo-p-dioxin (2,3,7,8-TCDD) based on consumption of aquatic organisms. The preamble of the CTR states that California NPDES permits should use toxicity equivalents (TEQs) where dioxin-like compounds have a reasonable potential with respect to narrative criteria. In USEPA's National Recommended WQOs, December 2002, USEPA published the 1998 World Health Organization Toxicity Equivalence Factor (TEF)[1] scheme. In addition, the CTR preamble states USEPA's intent to adopt revised WQC guidance subsequent to their health reassessment for dioxin-like compounds. The

[1] The 1998 WHO scheme includes TEFs for dioxin-like PCBs. Since dioxin-like PCBs are already included within "Total PCBs," for which the CTR has established a specific standard, dioxin-like PCBs are not included in this Order's version of the TEF scheme.

SIP applies to all toxic pollutants, including dioxins and furans. Staff used TEQs and the CTR criteria for 2,3,7,8-TCDD to translate the Basin Plan narrative WQOs for bioaccumulation to numeric WQOs for the other 16 congeners.

iii. USEPA's 303(d) listing determined that the narrative objective for bioaccumulative pollutants was not met because of the levels of dioxins and furans in the fish tissue.

iv **RPA Results.** From January 2002 through December 2005, maximum observed effluent concentrations (MECs) of dioxin-TEQ were 5.61×10^{-8} and 8.17×10^{-10} µg/L at Discharge Points 001 and 002, respectively. Because the MEC at Discharge 001 exceeds the numeric translation of the narrative objective (1.4×10^{-8} µg/L,) and the maximum ambient background concentration of 7.1×10^{-8} exceeds the most stringent applicable WQO, there is reasonable potential for discharges from Discharge Points 001 and 002 to cause or contribute to exceedances of applicable water quality criteria (trigger 1 and trigger 2, respectively), and this Order establishes effluent limitations for dioxin-TEQ for Discharge Points 001 and 002.

v. **Dioxin-TEQ Final Effluent Limits.** Final WQBELs for dioxin-TEQ, calculated according to methods presented in Section 1.4 of the SIP, are 2.8×10^{-8} and 1.4×10^{-8} µg/L as MDEL and AMEL, respectively, for both discharges. Dioxin-TEQ is a bioaccumulative pollutant, and therefore credit for dilution cannot be justified in developing effluent limitations for this pollutant. These final effluent limitations for dioxin-TEQ are not included in the Order, as the compliance schedule established for dioxin-TEQ exceeds the expected term of the Order. The Discharger shall comply with the final effluent limits starting June 1, 2017.

vi. **Plant Performance and Attainability.** During January 2002 through December 2005, the Discharger's effluent concentrations were in the range of 0 pg/L to 0.0561 pg/L (6 samples) for Discharge 001, and 0 pg/L to 0.000817 pg/L for Discharge 002 (5 samples). The Discharger's Infeasibility Analysis asserts the Discharger cannot immediately comply with these WQBELs for dioxin-TEQ. This Order includes a compliance schedule until May 31, 2017. Since there is insufficient data to either perform a meaningful statistical analysis or to calculate an interim effluent limit, this Order does not contain an interim effluent limitation for dioxins. Effluent limits may be imposed if more information is available or until a TMDL is developed for the Bay.

vii. **Antibacksliding.** The previous permit did not include a dioxins effluent limit for either discharge; therefore, the new limits are more stringent than the previous ones, which is consistent with antibacksliding requirements.

(10) **Bis (2-ethylhexyl) phthalate (BEHP).**

i. **BEHP WQC.** The most stringent applicable water quality criterion for bis (2-ethylhexyl) phthalate or BEHP, applicable to discharges from the C&H Sugar Company facility is 5.9 µg/L, which is a criterion from the CTR for the protection of human health when organisms only (not water) are consumed from the receiving water.

ii. **RPA Results.** From January 2002 through December 2005, maximum observed effluent concentrations (MECs) of BEHP were 21 and 17 µg/L at Discharge Points 001 and 002, respectively. Because the MECs at both outfalls exceed the most stringent applicable criterion of 5.9 µg/L, there is reasonable potential for discharges from Discharge Points 001 and 002 to cause or contribute to exceedances of applicable water quality criteria (trigger 1), and this Order establishes effluent limitations for BEHP for Discharge Points 001 and 002.

iii. **BEHP WQBELs.** The final WQBELs for BEHP calculated according to SIP procedures are 110 µg/L as the maximum daily effluent limit (MDEL) and 54 µg/L as the average monthly effluent limit (AMEL) for both discharge points. A dilution credit of 10:1 was incorporated into the calculation of WQBELs.

iv. **Plant Performance and Attainability.** During the period January 2002 through December 2005, the Discharger's BEHP effluent concentrations were in the range of <0.3 µg/L to 21 µg/L for Discharge 001 (8 samples), and <0.3 µg/L to 17 µg/L for Discharge 002 (6 samples). Since there is limited data to perform a meaningful statistical analysis to determine compliance attainability, a direct comparison between the MECs and AMELs was conducted. Since both MECs do not exceed the AMEL, it is expected that the Discharger can comply with these final effluent limitations.

v. **Antibacksliding/Antidegradation.** The previous permit did not include a BEHP effluent limit for either discharge; therefore, the new limits are more stringent than the previous ones, which is consistent with antibacksliding and antidegradation requirements.

D. Interim Effluent Limitations

1. SIP and Basin Plan Compliance Schedule Requirements.

The SIP and the Basin Plan authorize compliance schedules in a permit if an existing discharger cannot immediately comply with a new and more stringent effluent limitation. Compliance schedules for limitations derived from CTR or the NTR WQC are based on Section 2.2 of the SIP, and compliance schedules for

limitations derived from Basin Plan WQOs are based on the Basin Plan. Both the SIP and the Basin Plan require the discharger to demonstrate the infeasibility of achieving immediate compliance with the new limitation to qualify for a compliance schedule. The SIP and Basin Plan require the following documentation to be submitted to the Regional Water Board to support a finding of infeasibility:

- Descriptions of diligent efforts the Discharger has made to quantify pollutant levels in the discharge, sources of the pollutant in the waste stream, and the results of those efforts.
- Descriptions of source control and/or pollutant minimization efforts currently under way or completed.
- A proposed schedule for additional or future source control measures, pollutant minimization, or waste treatment.
- A demonstration that the proposed schedule is as short as practicable.

The Basin Plan provides for a 10-year compliance schedule to implement measures to comply with new standards as of the effective date of those standards. This provision applies to the objectives adopted in the 2004 Basin Plan Amendment. Additionally, the provision authorizes compliance schedules for new interpretations of other existing standards if the new interpretation results in more stringent limitations. The basis for compliance schedules is given in **Appendix F-4** of this Fact Sheet.

2. Feasibility Evaluation

On January 10, 2007, the Discharger submitted an infeasibility analysis (infeasibility analysis), asserting it is infeasible to immediately comply with the WQBELs, calculated according to SIP Section 1.4, for mercury and selenium at Discharger Point 001, and for mercury, selenium, and cyanide at Discharge Point 002. Regional Water Board staff performed statistical analysis using self-monitoring data from January 2002 through December 2005 to compare the mean, 95th percentile, and 99th percentile with the long-term average (LTA), AMEL, and MDEL, respectively, to confirm if it is feasible for the Discharger to comply with the WQBELs. If any LTA, AMEL, or MDEL exceed the mean, 95th percentile, or 99th percentile, respectively, the infeasibility for the Discharger to comply with WQBELs is confirmed statistically. When the statistical analysis is not meaningful duo to lack of data, or due to lack of appropriate distribution fit to the effluent data, a direct comparison between MEC and AMEL is made; infeasibility is confirmed when the MEC is greater than the AMEL. If infeasibility is confirmed, interim effluent limitations are established. The table below shows these comparisons in μg/L:

Table F-23. Summary of Feasibility Analysis and Interim Limitations (unit: μg/L)

	Mean / LTA	95th vs. AMEL	99th vs. MDEL	Feasible to Comply
Mercury (001)	0.018>0.01	0.05>0.018	0.089>0.046	No
Mercury (002)	0.019>0.0035	0.13>0.012	0.4>0.038	No
Selenium (001)	8.4>2.3	18>3.9	22>8.7	No
Cyanide (001)	0.66<2.0	MEC=4>AMEL=3.2		No
Cyanide (002)	4.8>0.3	15>2.9	19>6.4	No

For dioxin-TEQ compounds for both discharge points, due to limited effluent data, there is uncertainty in determining compliance or establishing an interim limitation. In addition, the Minimum Levels (MLs) developed for 2,3,7,8-TCDD and 16 congeners (referred to as dioxins) by the Regional Water Board and BACWA range from 5 pg/L to 50 pg/L, which are higher than the WQBELs. Because Order No. 00-025 did not include an effluent limitation for dioxin-TEQ, and data is insufficient to statistically determine an interim limitation for this pollutant, an interim limitation is not established by the Order; however, the Order includes a 10-year schedule for compliance with final limitations and requires additional monitoring. An interim limitation may be calculated and established as a discharge limitation, when sufficient data for dioxin-TEQ are available. As a result, this permit does not contain an interim limitation for dioxin-TEQ.

3. Compliance Schedule and Interim Effluent Limitations

This Order establishes a compliance schedule until April 27, 2010 for mercury, cyanide, and selenium. The final WQBELs for the above pollutants shall become effective on April 28, 2010, or until the Regional Water Board adopts the TMDLs for mercury and selenium or SSOs for cyanide. This Order includes cyanide WQBELs based on the draft SSOs. Since the compliance schedules extend beyond 1 year, pursuant to the SIP and 40 CFR §122.47, the Regional Water Board shall establish interim numeric limitations and interim requirements to control the pollutants. To maintain existing water quality, this Order establishes interim limits for mercury (001 and 002), selenium (001), and cyanide (001 and 002) based on the previous permit limits or existing plant performance, whichever is more stringent, unless antibacksliding and antidegradation requirements are satisfied. **Attachment F-4** of the Fact Sheet details the general basis for final compliance dates. The Regional Water Board may take appropriate enforcement actions if interim limitations and requirements are not met. Specific bases for these interim limits are described in the following findings for these pollutants.

Discharge Point 001

1) Mercury – There is no effluent limitation for mercury in the previous permit. Therefore, an interim limit of 0.16 μg/L based on recent performance (99.87th percentile or mean plus 3 standard deviations) is established as the interim limit, expressed as a daily maximum. The establishment of a performance-based effluent limit is allowed by CWA Section 404(o)(2)(C) and (E). This interim limit

will remain in effect until April 27, 2010, or until the Regional Water Board amends the limitation based on TMDL or additional data. A maximum compliance schedule is allowed for mercury because of the considerable uncertainty in determining an effective measure (e.g., pollution prevention, treatment upgrades) that should be implemented to ensure compliance with final limits.

2) Selenium – There is no effluent limitation for selenium in the previous permit. Therefore, an interim limit of 26 μg/L based on recent performance (99.87th percentile or mean plus 3 standard deviations) is established as the interim limit, expressed as a daily maximum. The establishment of a performance-based effluent limit is allowed by CWA Section 404(o)(2)(C) and (E). This interim limit will remain in effect until April 27, 2010, or until the Regional Water Board amends the limitation based on TMDL or additional data. A maximum compliance schedule is allowed for selenium because of the considerable uncertainty in determining an effective measure (e.g., pollution prevention, treatment upgrades) that should be implemented to ensure compliance with final limits.

3) Cyanide – There is no effluent limit for cyanide in the previous permit. Due to high censoring of the effluent data set, it is not feasible to calculate a 99.87th percentile; therefore, the SIP minimum level of 5 μg/L is set as the interim limitation, expressed as a daily maximum, and will remain in effect until April 27, 2010, or until the Regional Water Board amends the limitation based on an SSO or additional data. A maximum compliance schedule is allowed for cyanide because of the considerable uncertainty in determining an effective measure (e.g., pollution prevention, treatment upgrades) that should be implemented to ensure compliance with final limits.

Discharge Point 002

1) Mercury - The previous permit established the following interim, concentration-based and mass-based effluent limitations for mercury at Discharge Point 002.

Concentration-Based	Mass-Based
0.21 µg/L – average monthly	0.04 lbs/month – running annual average
1.0 µg/L – maximum daily	

The 99.87th percentile of the mercury effluent data is calculated to be 1.24 μg/L, the previous permit limits are more stringent. Therefore, the previous permit limits are retained as the interim effluent limits and will remain in effect until April 27, 2010, or until the Regional Water Board amends the limitation based on TMDL or additional data. The establishment of a performance-based effluent limit is allowed by CWA Section 404(o)(2)(C) and (E). A maximum compliance schedule is allowed for mercury because of the considerable uncertainty in determining an effective measure (e.g., pollution prevention, treatment upgrades) that should be implemented to ensure compliance with final limits.

2) Cyanide – There is no effluent limit for cyanide in the previous permit. Therefore, an interim limit of 22.8 μg/L based on recent performance (99.87th percentile or mean plus 3 standard deviations) is established as the interim limit, expressed as a daily maximum, and will remain in effect until April 27, 2010, or until the Regional Water Board amends the limitation based on an SSO or additional data. The establishment of a performance-based effluent limit is allowed by CWA Section 404(o)(2)(C) and (E). A maximum compliance schedule is allowed for cyanide because of the considerable uncertainty in determining an effective measure (e.g., pollution prevention, treatment upgrades) that should be implemented to ensure compliance with final limits.

4. Mercury Interim Mass Emission Limitation

This Order includes an interim performance-based mercury mass effluent limitations of 0.080 and 0.026 kg/month for Discharge Points 001 and 002, respectively. These performance-based mass effluent limitations are intended to maintain the discharges at current loadings. The mass limitations are calculated using the ultra-clean data collected from January 2002 through December 2005 as they better reflect the Discharger's performance. The recalculated mass limit is a reflection of better mercury effluent data (sampling and analytical techniques have improved). (See **Appendix F-5** for the mercury mass limitation calculation.) The mass limits will maintain current loadings until a TMDL is established for San Francisco Bay. The final mercury effluent limitations will be based on the Discharger's WLA in the TMDL.

The inclusion of interim performance-based mass limits for bioaccumulative pollutants is consistent with the guidance described in section 2.1.1 of the SIP. Because of their bioaccumulative nature, an uncontrolled increase in the total mass load of these pollutants in the receiving water will have significant adverse impacts on the aquatic ecosystem.

5. This Order also establishes interim requirements in a provision for development and/or improvement of a Pollution Prevention and Minimization Program to reduce pollutant loadings to the facilities and for submittal of annual reports on this Program.

E. Whole Effluent Toxicity

1. Whole Effluent Acute Toxicity.

a. **Discharge Point 001.** This Order does not include whole effluent acute toxicity effluent limits for Discharge Point 001. Discharge from 001 is primarily once-through cooling water, taken from the bay; 100 percent of this discharge is from the bay. Therefore, it is unlikely that this discharge will cause toxicity in Carquinez Strait, particularly given the dilution that occurs at the deep water outfall diffuser.

b. **Discharge Point 002.** This Order includes effluent limits for Discharge Point 002 for whole effluent acute toxicity that are unchanged from the previous Order. No acute toxicity was ever observed. All bioassays shall be performed according to

the U.S. EPA approved method in 40 CFR 136, currently "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 5th Edition." The Discharger is required to use the 5th Edition method for compliance determination upon the effective date of this Order.

2. Whole Effluent Chronic Toxicity

a. **Basin Paln ETCP.** The Basin Plan adopted an Effluent Toxicity Characterization Program (ETCP), with the goal of developing and implementing toxicity limits for each discharger based on actual characteristics of both receiving waters and waste streams. Dischargers were required, including this Discharger, to monitor their effluent using critical life stage toxicity tests to generate information on toxicity test species sensitivity and effluent variability to allow development of appropriate chronic toxicity effluent limitations. In 1988 and 1991, selected dischargers conducted two rounds of effluent characterization. A third round was completed in 1995. Regional Water Board guidelines for conducting toxicity tests and analyzing results were published in 1988 and last updated in 1991. The Regional Water Board implements water quality objectives for toxicity through the ETCP.

b. **Discharge Point 001.** This permit does not include whole effluent chronic toxicity requirements for Discharge 001. The Discharger conducted a variability phase test as required by ETCP. The results of the test using red abalone, purple sea urchin and marine diatom show that Discharge 001 does not contribute additional chronic toxicity to the influent bay water. Thus this Order continues the existing condition that no chronic toxicity test is required for Discharge 001.

c. **Discharge Point 002.**

(1) **Permit Requirements.** The nature and flow volume of Discharge 002 suggests that there is a low potential for the treated effluent to cause chronic toxicity in Carquinez Strait. There were no chronic toxicity requirements in the previous permit. However, in order to characterize this effluent and provide data for future permit reissuance, this permit includes new requirements for chronic toxicity monitoring based on the Basin Plan narrative toxicity objective, U.S. EPA and State Water Board Task Force guidance, and BPJ. This permit includes the Basin Plan narrative toxicity objective as the applicable effluent limit, implemented via monitoring with numeric values as "trigger" to initiate accelerated monitoring and to initiate a chronic toxicity reduction evaluation (TRE) as necessary. The permit requirements for chronic toxicity are consistent with the CTR and SIP requirements. If monitoring shows no chronic toxicity, this requirement may be removed for next permit reissuance.

(2) **Chronic Toxicity Trigger.** This Order includes a chronic toxicity trigger, which is a single sample maximum of 10 TUc. A single sample trigger is included based on the monitoring frequency and Basin Plan Table 4-5.

(3) **Permit Reopener.** The Regional Water Board will consider amending this permit to include numeric toxicity limits if the Discharger fails to aggressively implement all reasonable control measures included in its approved TRE workplan, following detection of consistent significant non-artifactual toxicity.

F. Intake Water Credits for Discharge 001

1. 40 CFR §122.45(g) and Section 1.4.4 of the SIP allows intake water credits where specified conditions are met.

   a. **40 CFR §122.45(g).** 40 CFR §122.45(g) allows credit for pollutants in intake water, in some cases where the facility is faced with situations in which limits are difficult or impossible to meet with BAT/BCT technology. Net credits are authorized only up to the extent necessary to meet the applicable limitation or standard, and if the intake water is taken from the same body of water into which the discharge is made.

   As previously described in this Order, Discharge 001 only contains once-through cooling water taken from the Bay; the Refinery does not add any pollutants into the discharge, nor does it treat the cooling water before discharge. Due to the characteristics of the discharge, BAT/BCT technologies may not result in any net environmental benefit. Based on this, Regional Water Board staff determined that the Discharger meets the conditions specified in 40 CFR §122.45(g).

   b. **Section 1.4.4 of the SIP.** The SIP allows intake water credits provided the Discharger meets the following conditions to the satisfaction of the Regional Water Board:

      1) The observed maximum ambient background concentration and the intake water concentration of the pollutant exceed the most stringent applicable WQO/WQC for that pollutant;

      2) The intake water credits are consistent with any TMDL applicable to the discharge;
      3) The intake water is from the same water body as the receiving water body;
      4) The facility does not alter the intake water pollutant chemically or physically in a manner that adversely affects water quality and beneficial uses; and
      5) The timing and location of the discharge does not cause adverse effects on water quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water body.

      The Discharger submitted an intake water credit request and additional information on August 7, 2006 and January 5, 2007, respectively (see **Attachment F-7**), justifying that it qualifies for intake water credit based on the SIP requirements at Discharge Point 001.

The Discharger sampled for arsenic, copper, lead, mercury, nickel, selenium, zinc, cyanide, and bis(2-ethylhexyl)phthalate at both intake water and discharge from February 2002 through July 2004. As discussed above, all pollutants in the discharge were detected above the applicable WQO/WQC.

The Discharger indicated in its August 7 request, "The discharge point is hydrologically connected to the intake source. All of the non-contact cooling intake water is from the Carquinez Strait and the intake structure is located approximately 500 feet upstream of Discharge Point 001. As 100 percent of the water discharged at 001 is from the same receiving water body, the intake water pollutants would have reached the vicinity of the discharge point in the receiving water within a reasonable time and with the same effect had it not been diverted by its use for cooling."

The Discharger performed statistical analysis on intake and effluent water quality data. The analysis shows that either intake concentrations are higher than those in the effluent or there is no significant difference between the intake and effluent quality for the above pollutants, except for nickel, where the higher intake water concentrations might be due to analytical variability.

Based on the Discharger's justifications, the Regional Water Board determines that C&H is qualified to receive intake water credit for its discharge of once-through cooling water through Discharge Point 001.

2. **Application of Intake Water Credit.**

Intake water credits are to offset any concentrations of the pollutant found in the intake water, and are only allowed on a pollutant-by-pollutant and discharge-by-discharge basis. Whenever an effluent concentration exceeds the effluent limits specified in this Order, the discharge may receive intake water credit (a) if the intake water concentration sampled during the same day is higher than the effluent concentration, or (b) if it can be statistically demonstrated that the effluent concentration is not significantly higher than the intake water concentrations. For the statistical analysis, the Discharger may establish a 90% confidence interval, based on the most recent intake water monitoring data (if intake water concentrations do not show a trend, then the analysis shall include as many historical data as possible - this may require a separate statistical analysis to determine the range of historical data that can be used in establishing a background condition); if the effluent data is higher than the upper confidence limit of the intake water confidence interval, then it is a violation. The Discharger will need to update the background condition with newly collected data whenever an analysis is needed.

G. Antidegradation Analysis

1. Changes in Flow and Pollutant Loads and Concentrations

The total flow from the facility is the combined C&H Sugar process wastewater flow and CSD municipal wastewater flow. The process flow could increase with the

foreseeable sugar production increase. The previous permit was based on a raw sugar melt rate of 2,810 tons per day, whereas this Order is based on 3,300 tons per day, an increase of about 17%. However, the municipal discharge is unlikely to increase much, if at all. The community of Crockett is relatively small and its potential for growth is limited due to geographic constraints. No significant development is proposed in the Crockett service area; therefore, CSD's dry weather flow is likely to remain close to existing levels. During high flow periods, CSD's flow is dominated by infiltration and inflow of storm water, which will not increase as a result of this Order. Furthermore, the municipal flow is limited by the fact that CSD fully uses its capacity allotment under its treatment contract with C&H.

All concentration-based effluent limits in this Order are either new, the same as those of the previous permit, or lower than those of the previous permit. The only exception is copper due to the incorporation of the newly developed water effect ratio (WER). The BOD_5 and TSS limits in this Order are expressed in terms of loads. To the extent that these limits are based on the new raw sugar melt rate, they are higher in this than the previous permit. However, the underlying BOD_5 and TSS concentration assumptions are the same as those used for the previous permit.

2. Potential for Water Quality Degradation

The concentration of copper discharges is unlikely to change because the Discharger proposes no changes to its treatment process. The Discharger will maintain its current treatment performance because it cannot manipulate its processes to adjust effluent copper levels independently of other treatment parameters. To maintain compliance with other effluent limits, the Discharger will maintain its current performance with respect to copper. Moreover, pollution minimization requirements are designed to maintain current performance.

Any possible small changes in Carquinez Strait copper concentrations would not be measurable, and no observable water quality degradation would occur. Ambient San Francisco Bay copper concentrations are very consistent from year to year at least partly due to the dominant role of sediments in determining dissolved copper concentrations. Sediments are a large repository of copper, and when sediments are suspended, copper may desorb and become dissolved, accounting for a large fraction of the dissolved ambient concentration. For this reason, the amount copper in Carquinez Strait is unlikely to change much, if at all, due to any changes resulting from this Order.

The foreseeable increase in TSS will be small and incremental, particularly when compared to other TSS sources to Carquinez Strait, through which all Central Valley discharges flow. Because the Discharger uses a deep water outfall equipped with a diffuser that provides greater than 10:1 dilution, the small change in TSS load will not be measurable in Carquinez Strait, and no observable water quality degradation will occur.

Likewise, the foreseeable increase in BOD_5 will also be small and incremental, particularly when compared to other BOD_5 sources to Carquinez Strait. Because the

Discharger uses a deep water outfall equipped with a diffuser, the small change in BOD_5 load will not be measurable in Carquinez Strait, and no observable water quality degradation will occur. Moreover, BOD_5 degrades relatively quickly, making increases in BOD_5 less observable.

3. Consistency with Antidegradation Policies

Carquinez Strait meets water quality standards for copper, TSS, and BOD_5. It is not listed as impaired by any of these pollutants. Therefore, the quality of Carquinez Strait waters exceeds levels necessary to support propagation of fish and wildlife, and recreation. In this case, some degradation is allowed pursuant to antidegradation policies, provided that the Water Board finds that (1) the lowering of water quality is necessary to accommodate important economic or social development in the area; (2) the reduced water quality fully protects existing beneficial uses; and (3) the highest statutory and regulatory requirements are imposed. No measurable or observable degradation is anticipated with respect to copper, TSS, or BOD_5.

Any degradation associated with this Order would accommodate commensurate economic and social development in the area. Increased TSS and BOD_5 loads will result from increased sugar production. In the unlikely event that copper concentrations were to rise, the increase would result from increased sugar production or possibly increased housing in Crockett. New housing provides a place for people to live, and increasing sugar production increases employment and tax revenues. Increased housing, employment, and tax revenues serve the economic and social development interests of the people of California.

The copper, TSS, and BOD_5 limits fully protect beneficial uses. Available data demonstrate that the new copper WER better reflects the water chemistry characteristics of Carquinez Strait than the default WER, which is more conservative than necessary to protect beneficial uses. Increased TSS and BOD_5 discharges will not cause a nuisance or depress oxygen concentrations such that beneficial uses are adversely affected because they will occur through a deep water outfall equipped with a diffuser to provide rapid mixing.

The copper, TSS, and BOD_5 limits are consistent with all applicable statutes and regulations. The copper limits are derived from applicable water quality standards in accordance with the SIP. The TSS and BOD_5 limits are derived from effluent guidelines for sugar refining and publicly owned treatment works. The limits are based on 40 CFR 125.3(c)(2) and (3) and rely on Best Professional Judgment. They represent Best Practicable Control Technology (BPT) and Best Conventional Pollutant Control Technology (BCT). Therefore, they represent the best practicable treatment or control available.

H. Storm Water Limitations

The storm water discharge shall not be outside the pH range of 6.5 to 8.5, and shall not have visible color or oil: These limitations are from the previous permit, and are based retained from the previous permit.

I. Land Discharge Specifications

N/A

J. Reclamation Specifications

N/A

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

1. Temperature Limitations. These limitations are retained from the previous permit and are based on the Thermal Plan.

2. Receiving Water Limitations V.A.2 through V.A.4 (conditions to be avoided). These limitations are in the previous permit and are based on the narrative/numerical objectives contained in Chapter 3 of the Basin Plan.

3. Receiving Water Limitations V.A.5 (compliance with State Law). This requirement is in the previous permit, requires compliance with Federal and State law, and is self-explanatory.

B. Groundwater

N/A

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

The principal purposes of a monitoring program by a discharger are to:

1. Document compliance with waste discharge requirements and prohibitions established by the Regional Water Board,

2. Facilitate self-policing by the discharger in the prevention and abatement of pollution arising from waste discharge,

3. Develop or assist in the development of limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards, and to

4. Prepare water and wastewater quality inventories.

   Section 122.48 of 40 CFR requires all NPDES permits to specify recording and reporting of monitoring results. Sections 13267 and 13383 of the California Water Code authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

The MRP is a standard requirement in almost all NPDES permits issued by the Regional Water Board, including this Order. It contains definitions of terms, specifies general sampling and analytical protocols, and sets out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Regional Water Board's policies. The MRP also contains a sampling program specific for this Facility. It defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents, for which no effluent limitations are established, is also required to provide data for future completion of RPAs for them.

A. Influent Monitoring

Flow monitoring requirements at Monitoring Locations I-1 (salt water intake) and I-2 (CSD), and COD monitoring requirements at P-1 (surge tank influent) are retained from the previous permit.

B. Effluent Monitoring

Discharge Point 001.

- Monitoring requirements for flow, BOD_5, pH, temperature, and conductivity are retained from the previous permit.

- The MRP establishes routine monitoring for toxics with effluent limitations established by this Order [As, Cu, Pb, Hg, Ni, Se, Zn, CN, dioxin-TEQ, and bis (2-ethylhexyl) phthalate].

- The MRP requires the Discharger to continue to sample for priority pollutants om accordance to the August 6, 2001 letter. The results will be used for RPA and effluent limit calculation for next permit reissuance.

Discharge Point 002.

- Monitoring requirements for the following parameters are retained from the previous permit: flow, dissolved oxygen, dissolved sulfides, pH, temperature, total coliform bacteria, total residual chlorine, hydrogen peroxide usage, settleable matter, and oil and grease.

- The MRP establishes monitoring requirements for acute toxicity at a frequency of one time every two weeks and chronic toxicity at once during the permit term or annually if toxicity is ever observed; whereas Order No. 00-025 had required only acute (not chronic) toxicity monitoring.

- The MRP establishes routine monitoring for toxics with effluent limitations established by this Order [Cu, Pb, Hg, CN, dioxin-TEQ, and bis (2-ethylhexyl) phthalate].

- Specific monitoring requirements for several toxics or families of toxic pollutants (total phenolic compounds, extractable hydrocarbons, purgeable hydrocarbons,

PAHs, organochlorine pesticides and PCBs, nitrogen and phosphorous containing pesticides, and chlorinated herbicides and acids, and tributyltin) are no longer required, because the MRP requires routine monitoring for toxics with effluent limitations, as well as monitoring for all CTR pollutants.

Discharge Points 003 – 016

- This order retains the same monitoring requirements for storm water discharges.

C. Whole Effluent Chronic Toxicity Screening

The screening phase monitoring is important to help determine which test species is most sensitive to the toxicity of the effluent for compliance monitoring as part of the compliance requirements. This requirement is based on the Basin Plan and BPJ.

D. Receiving Water Monitoring

1. Surface Water

The MRP retains all receiving water monitoring requirements from Order No. 00-025. Hardness monitoring is new and optional, if the Discharger wishes to use site-specific hardness for WQOs/WQC calculation for next permit reissuance.

2. Groundwater

N/A

E. Other Monitoring Requirements

N/A

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which, in accordance with 40 CFR 122.41 - 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in **Attachments D** and **G** of this Order.

B. Monitoring and Reporting Requirements

The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are contained in the MRP (**Attachment E**), Standard Provisions and SMP, Part A (**Attachment G)** of the Permit. This provision requires compliance with these documents, and is based on 40 CFR 122.63. The Standard Provisions and SMP, Part A are standard requirements in almost all NPDES permits issued by the Regional Water Board, including this Order. They contain definitions of terms, specify general sampling and analytical protocols, and set out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Regional Water Board's policies. The MRP contains a sampling program specific for the facility. It

defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents, for which no effluent limitations are established, is also required to provide data for future completion of RPAs for them.

C. Special Provisions

1. Reopener Provisions

These provisions are based on 40 CFR 123 and allow future modification of this Order and its effluent limitations as necessary in response to updated WQOs that may be established in the future.

2. Special Studies and Additional Monitoring Requirements

a. **Effluent Characterization for Selected Constituents.** This Order includes effluent limitations and routine monitoring requirements for toxic pollutants which are present in effluent at levels which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard. Monitoring for other toxic pollutants is required to provide on-going characterization of the discharges from the facility so that effluent limitations can be established, if necessary. The Discharger is required to monitor effluent in accordance with its Sampling Plan, which was prepared pursuant to August 6, 2001 sent by the Regional Water Board to all dischargers.

b. **Ambient Background Monitoring.** This provision, to continue to conduct receiving water monitoring, will provide on-going characterization of the receiving water and is based on the previous Order and the Basin Plan.

c. **CWA Section 316 (b) Requirements.**

CWA Section 316 (b) addresses adverse environmental impacts caused by the intake of once-through cooling water. Such impacts are most commonly described to include impingement of aquatic life on cooling water intake structures and entrainment of aquatic life within cooling water flows where it is subject to thermal and physical stresses. CWA Section 316 (b) requires that NPDES permits include requirements for the best technology available in the location, design, construction, and capacity of cooling water intake structures to minimize adverse environmental impacts. The Regional Water Board, like other permitting authorities, has been implementing Section 316 (b), using best professional judgment, on a case-by-case basis for more than 25 years; however, in 2001, USEPA began to promulgate rules to implement Section 316 (b).

On November 9, 2001 and December 26, 2002, USEPA finalized Phase I 316 (b) rules, applicable to new facilities that withdraw more than 2 MGD of water and use at least 25 percent of that water solely for cooling purposes. On February 16, 2004, USEPA finalized Phase II rules, applicable to existing power

generation facilities with cooling water intake structures designed for intake flows of 50 MGD or greater and using at least 25 percent of that water solely for cooling purposes. Phase III rules, which were intended to address existing facilities not covered by the Phase II rules, were proposed on November 1, 2004, and became effective on July 17, 2006. By adopting Phase III rules in a substantially simpler form than the proposed rules, USEPA concluded that NPDES permitting authorities should continue to implement Section 316 (b) for existing facilities not covered by the Phase II rule (except for certain offshore oil and gas facilities) on a case-by-case basis, using best professional judgment.

Provision VI. C. 2. d of this Order, therefore, reflects the best professional judgment of the Regional Water Board in implementing CWA Section 316 (b) - to establish the best technology available to minimize adverse environmental impacts associated with the facility's cooling water intake structure(s).

Provision VI. C. 2. d requires the Discharger to provide the following information to the Regional Water Board.

- A list and summary of historical studies characterizing: baseline biological conditions in area of influence of the facility's cooling water intake structure(s); impingement mortality and entrainment attributed to the facility's cooling water intake structure(s); and the physical conditions of Carquinez Strait in the vicinity of the facility's cooling water intake structure(s). The Discharger must describe the extent to which historical data are representative of current conditions and document that the data were collected using appropriate quality assurance/quality control procedures.

- A summary of source water physical data and cooling water intake structure data.

- A summary of past and on-going consultations with federal, state, and local fish and wildlife agencies regarding environmental impacts of the facility's cooling water intake structure(s).

- A sampling plan for field studies to develop or update scientifically valid estimates of impingement mortality and entrainment attributed to the facility's cooling water intake structure(s). As necessary, the sampling plan shall provide for source water, baseline biological characterization in the vicinity of the cooling water intake structure(s), in addition to identifying/describing methods to estimate impingement mortality and entrainment.

In large part, the 316 (b) requirements established by this Order for the C&H Sugar Company facility are based on the following requirements (for inclusion into NPDES permits) of the Phase II rule, which is codified at 40 CFR Part 125, Subpart J.

- Proposal for Information Collection [40 CFR 125.95 (b) (1)]

- Source water physical data, cooling water intake structure data, and cooling water system data [40 CFR 122.21 (r) (2, 3, and 5)]

- Comprehensive Demonstration Study, to include:

  - Source Waterbody Flow Information [40 CFR 125.95 (b) (2)]

  - Impingement Mortality and/or Entrainment Characterization Study [40 CFR 125.95 (b) (3)]

  - Design and Construction Technology Plan and a Technology Installation and Operation Plan [40 CFR 125.95 (b) (4)]

  - Restoration Plan [40 CFR 125.95 (b) (5)]

  - Information to Support Site-Specific Determination of BAT [40 CFR 125.95 (b) (6)]

  - Verification Monitoring Plan [40 CFR 125.95 (b) (6)]

d. **Mass offset.** This option is provided to encourage the Discharger to implement aggressive reduction of mass loads to the receiving water.

3. Pollution Minimization

This provision is based on Chapter 4 of the Basin Plan and Section 2.4.5 of the SIP.

Additionally, on October 15, 2003, the Regional Water Board adopted Resolution R2-2003-0096 in support of a collaborative working approach between the Regional Water Board and the Bay Area Clean Water Agencies to promote Pollution Minimization Program development and excellence. Specifically, the Resolution embodies a set of eleven guiding principles that will be used to develop tools such as “P2 menus” for specific pollutants, as well as provide guidance in improving P2 program efficiency and accountability. Key principles in the Resolution include promoting watershed, cross-program and cross-media approaches to pollution prevention, and jointly developing tools to assess program performance that may include peer reviews, self-audits or other formats.

4. Action Plan for Cyanide

This provision is based on the proposed Basin Plan Amendment that will adopt the site-specific objectives for cyanide for San Francisco Bay (Regional Water Board Resolution R2-2006-0086).

5. Action Plan for Copper

This provision is based on the proposed Basin Plan Amendment that will adopt the site-specific objectives for copper for San Francisco Bay (most recent document dated March 2, 2007).

6. Storm Water Pollution Prevention Plan and Best Management Practices Plan

This provision is retained from the previous Order. This provision requires ongoing implementation of the Storm Water Pollution Prevention Plan and Best Management Practices Plan, to ensure compliance with Federal storm water pollution controls. The SWPPP is based on the Standard Provisions (**Attachment G**), and BMPP on 40 CFR 125, Subpart K.

7. Construction, Operation, and Maintenance Specifications

a. **Wastewater Facilities, Review and Evaluation, Status Reports**. This provision is based on the previous permit and the Basin Plan.

b. **Operations and Maintenance Manual, Review and Status Reports.** This provision is based on the Basin Plan, the requirements of 40 CFR §122, and the previous permit.

c. **Contingency Plan, Review and Status Reports.** This provision is based on the Basin Plan, the requirements of 40 CFR §122, and the previous permit.

8. Special Provisions for Municipal Facilities

a. **Sludge Management Practices Requirements.** This provision is retained from the previous Order.

b. **Sanitary Sewer Overflows and Sewer System Management Plan.** This provision is to explain the Order's requirements as they relate to CSD's collection system, and to promote consistency with the State Water Resources Control Board adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Overflow (SSO WDRs) and a related Monitoring and Reporting Program (Order No. 2006-0003-DWQ). The bases for these requirements are described elsewhere in this Fact Sheet for those requirements.

c. **Settleable Matter Reduction.** This provision is retained from the previous Order. Due to significant amount of inflow and infiltration into CSD's collection system, the wet weather sewage flow from the CSD typically carries a high levels of settable matters. CSD has previously submitted a facilities plan for sewer system improvements. One of the purposes of the project is to reduce inflow and infiltration, and to improve the grit removal facilities to reduce the present operation and maintenance problems related to grit carryover to the JTP. This permit requires CSD to continue this effort as condition for interim effluent limits for settleable matter.

9. Compliance Schedules and Compliance with Final Effluent Limitations.

Mercury, Selenium, Dioxin-TEQ, and Cyanide Compliance Schedules: This provision is based on Basin Plan at p. 4-14 (Compliance Schedules), 40 CFR 122.47(a)(3), SIP 2.2.1. Maximum compliance schedules are allowed because of the considerable uncertainty in determining effective measures (e.g., pollution

prevention, treatment upgrades) that should be implemented to ensure compliance with final limits. In our view, it is appropriate to allow the Discharger sufficient time to first explore source control measures before requiring it to propose further actions, such as treatment plant upgrades, that are likely to be much more costly. This approach is supported by the Basin Plan (page 4-25), which states, "In general, it is often more economical to reduce overall pollutant loading into treatment systems than to install complex and expensive technology plant.

VIII. PUBLIC PARTICIPATION

The San Francisco Bay Regional Water Board is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for C&H Sugar Company. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the Contra Costa Times on February 10, 2007.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order, Attention Tong Yin.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on February 15, 2007**.**

C. Public Hearing

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date:	April 11, 2007
Time:	9:00 a.m.
Location:	Elihu Harris State Office Building 1515 Clay Street Oakland, CA 1st floor Auditorium
Contact:	Ms. Tong Yin, Phone: (510)622-2418; email: TYin@waterboards.ca.gov

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address is www.waterboards.ca.gov /sanfranciscobay where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (510) 622-2300.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Ms. Tong Yin at (510) 622-2418, or by e-mail at TYin@waterboards.ca.gov .

IX. APPENDICES

Appendix F-1. Effluent Data for Priority Pollutants
Appendix F-2. RPA Results for Priority Pollutants
Appendix F-3. Calculation of Final WQBELs
Appendix F-4. General Basis for Final Compliance Dates
Appendix F-5. Mercury Mass Limit Calculation
Appendix F-6. Discharger's Feasibility Analysis
Appendix F-7. Discharger's Intake Water Credit Request

Appendix F-1(1)
Effluent Data for Priority Pollutants for Discharge Point 001

Fact Sheet Appendix F-1(1)
C and H Sugar and CSD
Discharge Point 001- Priority Pollutant Effluent Data

No.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
1	Antinomy	8/7/2002	ND	0.2	ug/l	5	0.2		1
2	Antinomy	9/13/2002	ND	0.2	ug/l	2.5	0.2		1
3	Antinomy	10/11/2002	ND	0.2	ug/l	5	0.2		1
4	Antinomy	12/11/2002	ND	0.2	ug/l	1	0.2		1
5	Antinomy	4/11/2003	ND	0.2	ug/l	1	0.2		1
6	Antinomy	5/9/2003	ND	0.2	ug/l	1	0.2		1
7	Antinomy	7/3/2003	ND	0.2	ug/l	2.5	0.2		1
8	Antinomy	8/1/2003	ND	0.2	ug/l	2.5	0.2		1
9	Antinomy	9/12/2003	ND	0.2	ug/l	2.5	0.2		1
10	Antinomy	11/7/2003	ND	0.2	ug/l	2.5	0.2		1
11	Antinomy	1/16/2004	ND	0.2	ug/l	1	0.2		1
12	Antinomy	2/13/2004	ND	0.2	ug/l	2.5	0.2		1
13	Antinomy	3/12/2004	ND	0.2	ug/l	1	0.2		1
14	Antinomy	4/23/2004	ND	0.2	ug/l	0.5	0.2		1
15	Antinomy	5/7/2004	ND	0.2	ug/l	2.5	0.2		1
16	Antinomy	6/4/2004	ND	0.2	ug/l	2.5	0.2		1
17	Antinomy	7/16/2004	ND	0.2	ug/l	1	0.2		1
18	Antinomy	1/8/2003	J	0.2	ug/l	0.5	0.2		1
19	Antinomy	1/9/2002	J	0.3	ug/l	0.5	0.01		1
20	Antinomy	5/24/2002	J	0.3	ug/l	1	0.01		1
21	Antinomy	2/15/2002	J	0.4	ug/l	0.5	0.01		1
22	Antinomy	11/8/2002	J	0.4	ug/l	1	0.2		1
23	Antinomy	4/12/2002	J	0.6	ug/l	2.5	0.01		1
24	Antinomy	6/7/2002	J	0.6	ug/l	1	0.2		1
25	Antinomy	2/14/2003	J	0.6	ug/l	1	0.2		1
26	Antinomy	3/14/2003	J	0.6	ug/l	1	0.2		1
27	Antinomy	7/19/2002	J	0.7	ug/l	1	0.2		1
28	Antinomy	6/6/2003	J	1	ug/l	2.5	0.2		1
29	Antinomy	8/29/2003	J	1	ug/l	2.5	0.2		1
30	Antinomy	10/10/2003	J	1.4	ug/l	2.5	0.2		1
31	Antinomy	12/5/2003	J	1.4	ug/l	2.5	0.2		1
32	Antinomy	3/15/2002		0.6	ug/l	0.5	0.01		1
33	Arsenic	3/12/2004		6	ug/l	1	0.2		2
34	Arsenic	5/9/2003		7	ug/l	1	0.2		2
35	Arsenic	1/9/2002		11	ug/l	0.5	0.08		2
36	Arsenic	1/8/2003		11	ug/l	0.5	0.2		2
37	Arsenic	4/23/2004		11	ug/l	0.5	0.2		2
38	Arsenic	3/15/2002		12	ug/l	0.5	0.08		2
39	Arsenic	1/16/2004		13	ug/l	1	0.2		2
40	Arsenic	2/15/2002		14	ug/l	0.5	0.08		2
41	Arsenic	2/13/2004		16	ug/l	2.5	0.2		2
42	Arsenic	11/8/2002		21	ug/l	1	0.2		2
43	Arsenic	4/12/2002		22	ug/l	2.5	0.08		2
44	Arsenic	6/6/2003		22	ug/l	2.5	0.2		2
45	Arsenic	7/16/2004		22	ug/l	1	0.2		2
46	Arsenic	8/7/2002		23	ug/l	5	0.2		2
47	Arsenic	6/7/2002		24	ug/l	1	0.2		2
48	Arsenic	5/24/2002		25	ug/l	1	0.08		2
49	Arsenic	4/11/2003		27	ug/l	1	0.2		2
50	Arsenic	7/3/2003		27	ug/l	2.5	0.2		2
51	Arsenic	8/1/2003		27	ug/l	2.5	0.2		2
52	Arsenic	5/7/2004		29	ug/l	2.5	0.2		2
53	Arsenic	6/4/2004		29	ug/l	2.5	0.2		2
54	Arsenic	9/12/2003		32	ug/l	2.5	0.2		2
55	Arsenic	2/14/2003		33	ug/l	1	0.2		2
56	Arsenic	7/19/2002		35	ug/l	1	0.2		2
57	Arsenic	12/11/2002		36	ug/l	1	0.2		2
58	Arsenic	9/13/2002		38	ug/l	2.5	0.2		2
59	Arsenic	10/11/2002		38	ug/l	5	0.2		2
60	Arsenic	12/5/2003		38	ug/l	2.5	0.2		2
61	Arsenic	3/14/2003		39	ug/l	2.5	0.2		2

No.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
663	2-Methyl-4,6-Dinitrophenol	1/9/2002	ND	0.4	ug/l	5	0.4		48
664	2-Methyl-4,6-Dinitrophenol	7/18/2002	ND	0.9	ug/l	5	0.9		48
665	2-Methyl-4,6-Dinitrophenol	1/16/2003	ND	0.9	ug/l	5	0.9		48
666	2-Methyl-4,6-Dinitrophenol	8/14/2003	ND	0.9	ug/l	5	0.9		48
667	2-Methyl-4,6-Dinitrophenol	8/28/2003	ND	0.9	ug/l	5	0.9		48
668	2-Methyl-4,6-Dinitrophenol	1/15/2004	ND	0.9	ug/l	5	0.9		48
669	2-Methyl-4,6-Dinitrophenol	7/16/2004	ND	0.9	ug/l	5	0.9		48
670	2-Methyl-4,6-Dinitrophenol	1/13/2005	ND	2	ug/l	5	2		48
671	2,4-Dinitrophenol	1/9/2002	ND	0.3	ug/l	5	0.3		49
672	2,4-Dinitrophenol	7/18/2002	ND	0.6	ug/l	5	0.6		49
673	2,4-Dinitrophenol	1/16/2003	ND	0.6	ug/l	5	0.6		49
674	2,4-Dinitrophenol	8/14/2003	ND	0.6	ug/l	5	0.6		49
675	2,4-Dinitrophenol	8/28/2003	ND	0.6	ug/l	5	0.6		49
676	2,4-Dinitrophenol	1/15/2004	ND	0.6	ug/l	5	0.6		49
677	2,4-Dinitrophenol	7/16/2004	ND	0.6	ug/l	5	0.6		49
678	2,4-Dinitrophenol	1/13/2005	ND	2	ug/l	5	2		49
679	2-Nitrophenol	1/9/2002	ND	0.3	ug/l	5	0.3		50
680	2-Nitrophenol	7/18/2002	ND	0.7	ug/l	5	0.7		50
681	2-Nitrophenol	1/16/2003	ND	0.7	ug/l	5	0.7		50
682	2-Nitrophenol	8/14/2003	ND	0.7	ug/l	5	0.7		50
683	2-Nitrophenol	8/28/2003	ND	0.7	ug/l	5	0.7		50
684	2-Nitrophenol	1/15/2004	ND	0.7	ug/l	5	0.7		50
685	2-Nitrophenol	7/16/2004	ND	0.7	ug/l	5	0.7		50
686	2-Nitrophenol	1/13/2005	ND	1.1	ug/l	5	1.1		50
687	4-Nitrophenol	1/9/2002	ND	0.2	ug/l	5	0.2		51
688	4-Nitrophenol	7/18/2002	ND	0.6	ug/l	5	0.6		51
689	4-Nitrophenol	1/16/2003	ND	0.6	ug/l	5	0.6		51
690	4-Nitrophenol	8/14/2003	ND	0.6	ug/l	5	0.6		51
691	4-Nitrophenol	8/28/2003	ND	0.6	ug/l	5	0.6		51
692	4-Nitrophenol	1/15/2004	ND	0.6	ug/l	5	0.6		51
693	4-Nitrophenol	7/16/2004	ND	0.6	ug/l	5	0.6		51
694	4-Nitrophenol	1/13/2005	ND	1	ug/l	5	1		51
695	3-Methyl-4-Chlorophenol	1/9/2002	ND	0.3	ug/l	1	0.3		52
696	3-Methyl-4-Chlorophenol	7/18/2002	ND	0.5	ug/l	1	0.5		52
697	3-Methyl-4-Chlorophenol	1/16/2003	ND	0.5	ug/l	1	0.5		52
698	3-Methyl-4-Chlorophenol	8/14/2003	ND	0.5	ug/l	1	0.5		52
699	3-Methyl-4-Chlorophenol	8/28/2003	ND	0.5	ug/l	1	0.5		52
700	3-Methyl-4-Chlorophenol	1/15/2004	ND	0.5	ug/l	1	0.5		52
701	3-Methyl-4-Chlorophenol	7/16/2004	ND	0.5	ug/l	1	0.5		52
702	3-Methyl-4-Chlorophenol	1/13/2005	ND	0.93	ug/l	1	0.93		52
703	Pentachlorophenol	1/9/2002	ND	0.4	ug/l	1	0.4		53
704	Pentachlorophenol	7/18/2002	ND	0.9	ug/l	1	0.9		53
705	Pentachlorophenol	1/16/2003	ND	0.9	ug/l	1	0.9		53
706	Pentachlorophenol	8/14/2003	ND	0.9	ug/l	1	0.9		53
707	Pentachlorophenol	8/28/2003	ND	0.9	ug/l	1	0.9		53
708	Pentachlorophenol	1/15/2004	ND	0.9	ug/l	1	0.9		53
709	Pentachlorophenol	7/16/2004	ND	0.9	ug/l	1	0.9		53
710	Pentachlorophenol	1/13/2005	ND	0.98	ug/l	1	0.98		53
711	Phenol	01/09/2002	ND	0.2	ug/L	1	0.2		54
712	Phenol	07/18/2002	ND	0.4	ug/L	1	0.4		54
713	Phenol	01/16/2003	ND	0.4	ug/L	1	0.4		54
714	Phenol	08/14/2003	ND	0.4	ug/L	1	0.4		54
715	Phenol	08/28/2003	ND	0.4	ug/L	1	0.4		54
716	Phenol	01/15/2004	ND	0.4	ug/L	1	0.4		54
717	Phenol	07/16/2004	ND	0.4	ug/L	1	0.4		54
718	2,4,6-Trichlorophenol	1/9/2002	ND	0.2	ug/l	5	0.2		55
719	2,4,6-Trichlorophenol	7/18/2002	ND	0.6	ug/l	5	0.6		55
720	2,4,6-Trichlorophenol	1/16/2003	ND	0.6	ug/l	5	0.6		55
721	2,4,6-Trichlorophenol	8/14/2003	ND	0.6	ug/l	5	0.6		55
722	2,4,6-Trichlorophenol	8/28/2003	ND	0.6	ug/l	5	0.6		55
723	2,4,6-Trichlorophenol	1/15/2004	ND	0.6	ug/l	5	0.6		55

Fact Sheet Appendix F-1(1)
C and H Sugar and CSD
Discharge Point 001- Priority Pollutant Effluent Data

1	Antinomy	8/7/2002	ND	0.2	ug/l	5	0.2		1
62	Arsenic	11/7/2003		39	ug/l	2.5	0.2		2
63	Arsenic	8/29/2003		43	ug/l	2.5	0.2		2
64	Arsenic	10/10/2003		45	ug/l	2.5	0.2		2
65	Beryllium	1/9/2002	ND	0.06	ug/l	0.1	0.06		3
66	Beryllium	2/15/2002	ND	0.06	ug/l	0.1	0.06		3
67	Beryllium	3/15/2002	ND	0.06	ug/l	0.2	0.06		3
68	Beryllium	4/12/2002	ND	0.06	ug/l	0.5	0.06		3
69	Beryllium	5/24/2002	ND	0.06	ug/l	0.2	0.06		3
70	Beryllium	6/7/2002	ND	0.06	ug/l	0.2	0.06		3
71	Beryllium	7/19/2002	ND	0.06	ug/l	0.2	0.06		3
72	Beryllium	8/7/2002	ND	0.06	ug/l	1	0.06		3
73	Beryllium	9/13/2002	ND	0.06	ug/l	0.5	0.06		3
74	Beryllium	10/11/2002	ND	0.06	ug/l	1	0.06		3
75	Beryllium	11/8/2002	ND	0.06	ug/l	0.2	0.06		3
76	Beryllium	12/11/2002	ND	0.06	ug/l	0.2	0.06		3
77	Beryllium	1/8/2003	ND	0.06	ug/l	0.2	0.06		3
78	Beryllium	2/14/2003	ND	0.06	ug/l	0.2	0.06		3
79	Beryllium	3/14/2003	ND	0.06	ug/l	0.2	0.06		3
80	Beryllium	4/11/2003	ND	0.06	ug/l	0.2	0.06		3
81	Beryllium	5/9/2003	ND	0.06	ug/l	0.1	0.06		3
82	Beryllium	6/6/2003	ND	0.06	ug/l	0.2	0.06		3
83	Beryllium	7/3/2003	ND	0.06	ug/l	0.5	0.06		3
84	Beryllium	8/1/2003	ND	0.06	ug/l	0.1	0.06		3
85	Beryllium	8/29/2003	ND	0.06	ug/l	0.5	0.06		3
86	Beryllium	9/12/2003	ND	0.06	ug/l	0.5	0.06		3
87	Beryllium	10/10/2003	ND	0.06	ug/l	0.5	0.06		3
88	Beryllium	11/7/2003	ND	0.06	ug/l	0.5	0.06		3
89	Beryllium	12/5/2003	ND	0.06	ug/l	0.5	0.06		3
90	Beryllium	1/16/2004	ND	0.06	ug/l	0.2	0.06		3
91	Beryllium	2/13/2004	ND	0.06	ug/l	0.5	0.06		3
92	Beryllium	3/12/2004	ND	0.06	ug/l	0.2	0.06		3
93	Beryllium	4/23/2004	ND	0.06	ug/l	0.1	0.06		3
94	Beryllium	5/7/2004	ND	0.06	ug/l	0.2	0.06		3
95	Beryllium	6/4/2004	ND	0.06	ug/l	0.2	0.06		3
96	Beryllium	7/16/2004	ND	0.06	ug/l	0.2	0.06		3
97	Cadmium	8/7/2002	ND	0.03	ug/l	1	0.03		4
98	Cadmium	9/13/2002	ND	0.03	ug/l	0.5	0.03		4
99	Cadmium	10/11/2002	ND	0.03	ug/l	1	0.03		4
100	Cadmium	12/11/2002	ND	0.03	ug/l	0.2	0.03		4
101	Cadmium	2/14/2003	ND	0.03	ug/l	0.2	0.03		4
102	Cadmium	3/14/2003	ND	0.03	ug/l	0.2	0.03		4
103	Cadmium	5/9/2003	ND	0.03	ug/l	0.2	0.03		4
104	Cadmium	6/6/2003	ND	0.03	ug/l	0.5	0.03		4
105	Cadmium	7/3/2003	ND	0.03	ug/l	0.5	0.03		4
106	Cadmium	8/1/2003	ND	0.03	ug/l	0.5	0.03		4
107	Cadmium	8/29/2003	ND	0.03	ug/l	0.5	0.03		4
108	Cadmium	9/12/2003	ND	0.03	ug/l	0.5	0.03		4
109	Cadmium	10/10/2003	ND	0.03	ug/l	0.5	0.03		4
110	Cadmium	11/7/2003	ND	0.03	ug/l	0.5	0.03		4
111	Cadmium	12/5/2003	ND	0.03	ug/l	0.5	0.03		4
112	Cadmium	1/16/2004	ND	0.03	ug/l	0.2	0.03		4
113	Cadmium	2/13/2004	ND	0.03	ug/l	0.5	0.03		4
114	Cadmium	5/7/2004	ND	0.03	ug/l	0.5	0.03		4
115	Cadmium	6/4/2004	ND	0.03	ug/l	0.5	0.03		4
116	Cadmium	1/8/2003	J	0.04	ug/l	0.1	0.03		4
117	Cadmium	3/12/2004	J	0.04	ug/l	0.1	0.03		4
118	Cadmium	4/23/2004	J	0.04	ug/l	0.1	0.03		4
119	Cadmium	3/15/2002	J	0.05	ug/l	0.1	0.04		4
120	Cadmium	1/9/2002	J	0.06	ug/l	0.1	0.04		4
121	Cadmium	4/11/2003	J	0.06	ug/l	0.2	0.03		4
122	Cadmium	11/8/2002	J	0.07	ug/l	0.2	0.03		4

663	2-Methyl-4,6-Dinitrophenol	1/9/2002	ND	0.4	ug/l	5	0.4		48
724	2,4,6-Trichlorophenol	7/16/2004	ND	0.6	ug/l	5	0.6		55
725	2,4,6-Trichlorophenol	1/13/2005	ND	2	ug/l	5	2		55
726	Acnaphthene	1/13/2005	ND	0.031	ug/l	0.31	0.031		56
727	Acnaphthene	1/9/2002	ND	0.17	ug/l	0.3	0.17		56
728	Acnaphthene	7/24/2002	ND	0.17	ug/l	0.3	0.17		56
729	Acnaphthene	1/16/2003	ND	0.17	ug/l	0.3	0.17		56
730	Acnaphthene	8/14/2003	ND	0.17	ug/l	0.3	0.17		56
731	Acnaphthene	8/28/2003	ND	0.17	ug/l	0.3	0.17		56
732	Acnaphthene	1/15/2004	ND	0.17	ug/l	0.3	0.17		56
733	Acnaphthene	7/16/2004	ND	0.17	ug/l	0.3	0.17		56
734	Acenephthylene	1/13/2005	ND	0.02	ug/l	0.2	0.02		57
735	Acenephthylene	1/9/2002	ND	0.03	ug/l	0.2	0.03		57
736	Acenephthylene	7/24/2002	ND	0.03	ug/l	0.2	0.03		57
737	Acenephthylene	1/16/2003	ND	0.03	ug/l	0.2	0.03		57
738	Acenephthylene	8/14/2003	ND	0.03	ug/l	0.2	0.03		57
739	Acenephthylene	8/28/2003	ND	0.03	ug/l	0.2	0.03		57
740	Acenephthylene	1/15/2004	ND	0.03	ug/l	0.2	0.03		57
741	Acenephthylene	7/16/2004	ND	0.03	ug/l	0.2	0.03		57
742	Anthracene	1/13/2005	ND	0.031	ug/l	0.31	0.031		58
743	Anthracene	1/9/2002	ND	0.16	ug/l	0.3	0.16		58
744	Anthracene	7/24/2002	ND	0.16	ug/l	0.3	0.16		58
745	Anthracene	1/16/2003	ND	0.16	ug/l	0.3	0.16		58
746	Anthracene	8/14/2003	ND	0.16	ug/l	0.3	0.16		58
747	Anthracene	8/28/2003	ND	0.16	ug/l	0.3	0.16		58
748	Anthracene	1/15/2004	ND	0.16	ug/l	0.3	0.16		58
749	Anthracene	7/16/2004	ND	0.16	ug/l	0.3	0.16		58
750	Benzidine	1/9/2002	ND	0.3	ug/l	5	0.3		59
751	Benzidine	7/18/2002	ND	1	ug/l	5	1		59
752	Benzidine	1/16/2003	ND	1	ug/l	5	1		59
753	Benzidine	8/14/2003	ND	1	ug/l	5	1		59
754	Benzidine	8/28/2003	ND	1	ug/l	5	1		59
755	Benzidine	1/15/2004	ND	1	ug/l	5	1		59
756	Benzidine	7/16/2004	ND	1	ug/l	5	1		59
757	Benzidine	1/13/2005	ND	1	ug/l	5	1		59
758	Benzo(a)Anthracene	1/13/2005	ND	0.02	ug/l	0.31	0.02		60
759	Benzo(a)Anthracene	1/9/2002	ND	0.12	ug/l	0.3	0.12		60
760	Benzo(a)Anthracene	7/24/2002	ND	0.12	ug/l	0.3	0.12		60
761	Benzo(a)Anthracene	1/16/2003	ND	0.12	ug/l	0.3	0.12		60
762	Benzo(a)Anthracene	8/14/2003	ND	0.12	ug/l	0.3	0.12		60
763	Benzo(a)Anthracene	8/28/2003	ND	0.12	ug/l	0.3	0.12		60
764	Benzo(a)Anthracene	1/15/2004	ND	0.12	ug/l	0.3	0.12		60
765	Benzo(a)Anthracene	7/16/2004	ND	0.12	ug/l	0.3	0.12		60
766	Benzo(a)Pyrene	1/13/2005	ND	0.02	ug/l	0.31	0.02		61
767	Benzo(a)Pyrene	1/9/2002	ND	0.09	ug/l	0.3	0.09		61
768	Benzo(a)Pyrene	7/24/2002	ND	0.09	ug/l	0.3	0.09		61
769	Benzo(a)Pyrene	1/16/2003	ND	0.09	ug/l	0.3	0.09		61
770	Benzo(a)Pyrene	8/14/2003	ND	0.09	ug/l	0.3	0.09		61
771	Benzo(a)Pyrene	8/28/2003	ND	0.09	ug/l	0.3	0.09		61
772	Benzo(a)Pyrene	1/15/2004	ND	0.09	ug/l	0.3	0.09		61
773	Benzo(a)Pyrene	7/16/2004	ND	0.09	ug/l	0.3	0.09		61
774	Benzo(b)Fluoranthene	1/13/2005	ND	0.031	ug/l	0.31	0.031		62
775	Benzo(b)Fluoranthene	1/9/2002	ND	0.11	ug/l	0.3	0.11		62
776	Benzo(b)Fluoranthene	7/24/2002	ND	0.11	ug/l	0.3	0.11		62
777	Benzo(b)Fluoranthene	1/16/2003	ND	0.11	ug/l	0.3	0.11		62
778	Benzo(b)Fluoranthene	8/14/2003	ND	0.11	ug/l	0.3	0.11		62
779	Benzo(b)Fluoranthene	8/28/2003	ND	0.11	ug/l	0.3	0.11		62
780	Benzo(b)Fluoranthene	1/15/2004	ND	0.11	ug/l	0.3	0.11		62
781	Benzo(b)Fluoranthene	7/16/2004	ND	0.11	ug/l	0.3	0.11		62
782	Benzo(ghi)Perylene	1/13/2005	ND	0.031	ug/l	0.1	0.031		63
783	Benzo(ghi)Perylene	1/9/2002	ND	0.06	ug/l	0.1	0.06		63
784	Benzo(ghi)Perylene	7/24/2002	ND	0.06	ug/l	0.1	0.06		63

Fact Sheet Appendix F-1(1)
C and H Sugar and CSD
Discharge Point 001- Priority Pollutant Effluent Data

1	Antinomy	8/7/2002	ND	0.2	ug/l	5	0.2		1
123	Cadmium	5/24/2002	J	0.09	ug/l	0.2	0.04		4
124	Cadmium	4/12/2002	J	0.1	ug/l	0.5	0.04		4
125	Cadmium	7/19/2002	J	0.1	ug/l	0.2	0.03		4
126	Cadmium	6/7/2002	J	0.2	ug/l	0.2	0.03		4
127	Cadmium	2/15/2002		0.1	ug/l	0.1	0.04		4
128	Cadmium	7/16/2004		0.6	ug/l	0.2	0.03		4
129	Chromium	08/07/2002	ND	0.2	ug/L	5	0.2		5
130	Chromium	09/13/2002	ND	0.2	ug/L	2.5	0.2		5
131	Chromium	10/11/2002	ND	0.2	ug/L	5	0.2		5
132	Chromium	12/11/2002	ND	0.2	ug/L	1	0.2		5
133	Chromium	04/11/2003	J	0.96	ug/L	1	0.2		5
134	Chromium	10/10/2003	J	1.1	ug/L	2.5	0.2		5
135	Chromium	06/04/2004	J	1.1	ug/L	2.5	0.2		5
136	Chromium	04/12/2002	J	1.5	ug/L	2.5	0.2		5
137	Chromium	11/07/2003	J	1.5	ug/L	2.5	0.2		5
138	Chromium	02/14/2003		1	ug/L	1	0.2		5
139	Chromium	03/14/2003		1	ug/L	1	0.2		5
140	Chromium	11/08/2002		2	ug/L	1	0.2		5
141	Chromium	02/13/2004		2.6	ug/L	2.5	0.2		5
142	Chromium	02/13/2004		2.6	ug/L	2.5	0.2		5
143	Chromium	07/19/2002		3	ug/L	1	0.2		5
144	Chromium	01/16/2004		3	ug/L	1	0.2		5
145	Chromium	07/16/2004		3	ug/L	1	0.2		5
146	Chromium	06/06/2003		3.8	ug/L	2.5	0.2		5
147	Chromium	12/05/2003		4	ug/L	2.5	0.2		5
148	Chromium	08/29/2003		4.1	ug/L	2.5	0.2		5
149	Chromium	05/24/2002		5	ug/L	1	0.2		5
150	Chromium	06/07/2002		5	ug/L	1	0.2		5
151	Chromium	03/15/2002		6	ug/L	1	0.2		5
152	Chromium	09/12/2003		6	ug/L	2.5	0.2		5
153	Chromium	03/12/2004		6	ug/L	1	0.2		5
154	Chromium	01/08/2003		6.4	ug/L	0.5	0.2		5
155	Chromium	08/01/2003		6.9	ug/L	2.5	0.2		5
156	Chromium	07/03/2003		7.9	ug/L	2.5	0.2		5
157	Chromium	05/09/2003		10	ug/L	1	0.2		5
158	Chromium	01/09/2002		11	ug/L	0.5	0.2		5
159	Chromium	04/23/2004		12	ug/L	0.5	0.2		5
160	Chromium	02/15/2002		30	ug/L	0.5	0.2		5
161	Chromium	05/07/2004		40	ug/L	2.5	0.2		5
162	Copper	5/9/2003		6	ug/l	1	0.3		6
163	Copper	2/15/2002		6.5	ug/l	0.5	0.2		6
164	Copper	6/7/2002		7	ug/l	1	0.3		6
165	Copper	4/23/2004		7	ug/l	0.5	0.3		6
166	Copper	3/12/2004		7.3	ug/l	0.5	0.3		6
167	Copper	8/1/2003		7.5	ug/l	2.5	0.3		6
168	Copper	6/4/2004		7.8	ug/l	2.5	0.3		6
169	Copper	7/3/2003		7.9	ug/l	2.5	0.3		6
170	Copper	4/12/2002		8.3	ug/l	2.5	0.2		6
171	Copper	3/15/2002		8.4	ug/l	0.5	0.2		6
172	Copper	2/13/2004		8.4	ug/l	2.5	0.3		6
173	Copper	1/8/2003		8.6	ug/l	0.5	0.3		6
174	Copper	6/6/2003		8.7	ug/l	2.5	0.3		6
175	Copper	5/24/2002		9	ug/l	1	0.2		6
176	Copper	7/19/2002		9	ug/l	1	0.3		6
177	Copper	1/16/2004		9	ug/l	1	0.3		6
178	Copper	7/16/2004		9	ug/l	1	0.3		6
179	Copper	12/5/2003		9.1	ug/l	2.5	0.3		6
180	Copper	1/9/2002		10	ug/l	0.5	0.2		6
181	Copper	9/13/2002		10	ug/l	2.5	0.3		6
182	Copper	11/8/2002		10	ug/l	1	0.3		6
183	Copper	12/11/2002		10	ug/l	2	0.3		6

663	2-Methyl-4,6-Dinitrophenol	1/9/2002	ND	0.4	ug/l	5	0.4		48
785	Benzo(ghi)Perylene	1/16/2003	ND	0.06	ug/l	0.1	0.06		63
786	Benzo(ghi)Perylene	8/14/2003	ND	0.06	ug/l	0.1	0.06		63
787	Benzo(ghi)Perylene	8/28/2003	ND	0.06	ug/l	0.1	0.06		63
788	Benzo(ghi)Perylene	1/15/2004	ND	0.06	ug/l	0.1	0.06		63
789	Benzo(ghi)Perylene	7/16/2004	ND	0.06	ug/l	0.1	0.06		63
790	Benzo(k)Fluoranthene	1/13/2005	ND	0.041	ug/l	0.31	0.041		64
791	Benzo(k)Fluoranthene	1/9/2002	ND	0.16	ug/l	0.3	0.16		64
792	Benzo(k)Fluoranthene	7/24/2002	ND	0.16	ug/l	0.3	0.16		64
793	Benzo(k)Fluoranthene	1/16/2003	ND	0.16	ug/l	0.3	0.16		64
794	Benzo(k)Fluoranthene	8/14/2003	ND	0.16	ug/l	0.3	0.16		64
795	Benzo(k)Fluoranthene	8/28/2003	ND	0.16	ug/l	0.3	0.16		64
796	Benzo(k)Fluoranthene	1/15/2004	ND	0.16	ug/l	0.3	0.16		64
797	Benzo(k)Fluoranthene	7/16/2004	ND	0.16	ug/l	0.3	0.16		64
798	Bis(2-Chloroethoxy)Methane	1/9/2002	ND	0.3	ug/l	5	0.3		65
799	Bis(2-Chloroethoxy)Methane	1/13/2005	ND	0.8	ug/l	5	0.8		65
800	Bis(2-Chloroethoxy)Methane	7/18/2002	ND	0.9	ug/l	5	0.9		65
801	Bis(2-Chloroethoxy)Methane	1/16/2003	ND	0.9	ug/l	5	0.9		65
802	Bis(2-Chloroethoxy)Methane	8/14/2003	ND	0.9	ug/l	5	0.9		65
803	Bis(2-Chloroethoxy)Methane	8/28/2003	ND	0.9	ug/l	5	0.9		65
804	Bis(2-Chloroethoxy)Methane	1/15/2004	ND	0.9	ug/l	5	0.9		65
805	Bis(2-Chloroethoxy)Methane	7/16/2004	ND	0.9	ug/l	5	0.9		65
806	Bis(2-Chloroethyl)Ether	1/9/2002	ND	0.3	ug/l	1	0.3		66
807	Bis(2-Chloroethyl)Ether	7/18/2002	ND	0.7	ug/l	1	0.7		66
808	Bis(2-Chloroethyl)Ether	1/16/2003	ND	0.7	ug/l	1	0.7		66
809	Bis(2-Chloroethyl)Ether	8/14/2003	ND	0.7	ug/l	1	0.7		66
810	Bis(2-Chloroethyl)Ether	8/28/2003	ND	0.7	ug/l	1	0.7		66
811	Bis(2-Chloroethyl)Ether	1/15/2004	ND	0.7	ug/l	1	0.7		66
812	Bis(2-Chloroethyl)Ether	7/16/2004	ND	0.7	ug/l	1	0.7		66
813	Bis(2-Chloroethyl)Ether	1/13/2005	ND	0.7	ug/l	1	0.7		66
814	Bis(2-Chloroisopropyl)Ether	7/18/2002	ND	0.6	ug/l	2	0.6		67
815	Bis(2-Chloroisopropyl)Ether	1/16/2003	ND	0.6	ug/l	2	0.6		67
816	Bis(2-Chloroisopropyl)Ether	8/14/2003	ND	0.6	ug/l	2	0.6		67
817	Bis(2-Chloroisopropyl)Ether	8/28/2003	ND	0.6	ug/l	2	0.6		67
818	Bis(2-Chloroisopropyl)Ether	1/15/2004	ND	0.6	ug/l	2	0.6		67
819	Bis(2-Chloroisopropyl)Ether	7/16/2004	ND	0.6	ug/l	2	0.6		67
820	Bis(2-Chloroisopropyl)Ether	1/13/2005	ND	0.7	ug/l	2	0.7		67
821	Bis(2-Chloroisopropyl)Ether	1/9/2002	ND	1	ug/l	2	1		67
822	Bis(2-Ethylhexyl)Phthalate	1/9/2002	ND	0.3	ug/l	5	0.3		68
823	Bis(2-Ethylhexyl)Phthalate	7/18/2002	ND	0.8	ug/l	5	0.8		68
824	Bis(2-Ethylhexyl)Phthalate	1/16/2003	ND	0.8	ug/l	5	0.8		68
825	Bis(2-Ethylhexyl)Phthalate	8/14/2003	ND	0.8	ug/l	5	0.8		68
826	Bis(2-Ethylhexyl)Phthalate	8/28/2003	ND	0.8	ug/l	5	0.8		68
827	Bis(2-Ethylhexyl)Phthalate	7/16/2004	ND	0.8	ug/l	5	0.8		68
828	Bis(2-Ethylhexyl)Phthalate	1/15/2004	J	4	ug/l	5	0.8		68
829	Bis(2-Ethylhexyl)Phthalate	1/13/2005		21	ug/l	3	0.5		68
830	4-Bromophenyl Phenyl Ether	7/18/2002	ND	0.4	ug/l	5	0.4		69
831	4-Bromophenyl Phenyl Ether	1/16/2003	ND	0.4	ug/l	5	0.4		69
832	4-Bromophenyl Phenyl Ether	8/14/2003	ND	0.4	ug/l	5	0.4		69
833	4-Bromophenyl Phenyl Ether	8/28/2003	ND	0.4	ug/l	5	0.4		69
834	4-Bromophenyl Phenyl Ether	1/15/2004	ND	0.4	ug/l	5	0.4		69
835	4-Bromophenyl Phenyl Ether	7/16/2004	ND	0.4	ug/l	5	0.4		69
836	4-Bromophenyl Phenyl Ether	1/9/2002	ND	0.5	ug/l	5	0.5		69
837	4-Bromophenyl Phenyl Ether	1/13/2005	ND	2	ug/l	5	2		69
838	Butylbenzyl Phthalate	1/9/2002	ND	0.4	ug/l	5	0.4		70
839	Butylbenzyl Phthalate	7/18/2002	ND	0.8	ug/l	5	0.8		70
840	Butylbenzyl Phthalate	1/16/2003	ND	0.8	ug/l	5	0.8		70
841	Butylbenzyl Phthalate	8/14/2003	ND	0.8	ug/l	5	0.8		70
842	Butylbenzyl Phthalate	8/28/2003	ND	0.8	ug/l	5	0.8		70
843	Butylbenzyl Phthalate	1/15/2004	ND	0.8	ug/l	5	0.8		70
844	Butylbenzyl Phthalate	7/16/2004	ND	0.8	ug/l	5	0.8		70
845	Butylbenzyl Phthalate	1/13/2005	ND	2	ug/l	5	2		70

1	Antinomy	8/7/2002	ND	0.2	ug/l	5	0.2		1
184	Copper	8/7/2002		11	ug/l	5	0.3		6
185	Copper	10/11/2002		11	ug/l	5	0.3		6
186	Copper	4/11/2003		12	ug/l	1	0.3		6
187	Copper	9/12/2003		12	ug/l	2.5	0.3		6
188	Copper	2/14/2003		13	ug/l	1	0.3		6
189	Copper	11/7/2003		13	ug/l	2.5	0.3		6
190	Copper	3/14/2003		16	ug/l	1	0.3		6
191	Copper	5/7/2004		16	ug/l	2.5	0.3		6
192	Copper	8/29/2003		17	ug/l	2.5	0.3		6
193	Copper	10/10/2003		20	ug/l	2.5	0.3		6
194	Lead	10/11/2002	ND	0.04	ug/l	2.5	0.04		7
195	Lead	12/11/2002	ND	0.04	ug/l	0.5	0.04		7
196	Lead	9/12/2003	ND	0.04	ug/l	1.3	0.04		7
197	Lead	2/14/2003	J	0.15	ug/l	0.5	0.04		7
198	Lead	9/13/2002	J	0.25	ug/l	1.3	0.04		7
199	Lead	6/7/2002	J	0.27	ug/l	0.5	0.04		7
200	Lead	7/19/2002	J	0.3	ug/l	1.3	0.04		7
201	Lead	4/11/2003	J	0.32	ug/l	0.5	0.04		7
202	Lead	10/10/2003	J	0.33	ug/l	1.3	0.04		7
203	Lead	6/6/2003	J	0.36	ug/l	0.5	0.04		7
204	Lead	1/16/2004	J	0.46	ug/l	0.5	0.04		7
205	Lead	8/1/2003	J	0.59	ug/l	1.3	0.04		7
206	Lead	2/13/2004	J	0.59	ug/l	1.3	0.04		7
207	Lead	11/7/2003	J	0.62	ug/l	1.3	0.04		7
208	Lead	6/4/2004	J	0.67	ug/l	1.3	0.04		7
209	Lead	8/7/2002	J	0.7	ug/l	2.5	0.04		7
210	Lead	4/12/2002	J	0.71	ug/l	1.3	0.02		7
211	Lead	12/5/2003	J	0.8	ug/l	1.3	0.04		7
212	Lead	7/3/2003	J	1.1	ug/l	1.3	0.04		7
213	Lead	8/29/2003	J	1.1	ug/l	1.3	0.04		7
214	Lead	5/24/2002		0.6	ug/l	0.5	0.02		7
215	Lead	7/16/2004		0.62	ug/l	0.5	0.04		7
216	Lead	2/15/2002		0.67	ug/l	0.25	0.02		7
217	Lead	11/8/2002		0.84	ug/l	0.5	0.04		7
218	Lead	4/23/2004		0.95	ug/l	0.25	0.04		7
219	Lead	5/9/2003		1.1	ug/l	0.5	0.04		7
220	Lead	1/8/2003		1.2	ug/l	0.25	0.04		7
221	Lead	3/12/2004		1.3	ug/l	0.5	0.04		7
222	Lead	3/14/2003		1.4	ug/l	0.5	0.04		7
223	Lead	1/9/2002		1.7	ug/l	0.25	0.02		7
224	Lead	3/15/2002		1.8	ug/l	0.5	0.02		7
225	Lead	5/7/2004		2.6	ug/l	1.3	0.04		7
226	Mercury	11/7/2002		0.0031	ug/l	0.0005	0.0002		8
227	Mercury	10/10/2002		0.0034	ug/l	0.0005	0.0002		8
228	Mercury	8/28/2003		0.0046	ug/l	0.0005	0.0002		8
229	Mercury	11/6/2003		0.005	ug/l	0.0005	0.0002		8
230	Mercury	10/9/2003		0.0063	ug/l	0.0005	0.0002		8
231	Mercury	9/13/2002		0.0068	ug/l	0.0005	0.0002		8
232	Mercury	2/13/2003		0.0068	ug/l	0.0005	0.0002		8
233	Mercury	6/6/2002		0.0069	ug/l	0.0005	0.0002		8
234	Mercury	7/2/2003		0.0071	ug/l	0.0005	0.0002		8
235	Mercury	12/4/2003		0.0073	ug/l	0.0005	0.0002		8
236	Mercury	12/10/2002		0.0077	ug/l	0.0005	0.0002		8
237	Mercury	4/10/2003		0.0077	ug/l	0.0005	0.0002		8
238	Mercury	3/13/2003		0.008	ug/l	0.0005	0.0002		8
239	Mercury	6/6/2003		0.008	ug/l	0.0005	0.0002		8
240	Mercury	5/8/2003		0.01	ug/l	0.0005	0.0002		8
241	Mercury	1/15/2004		0.011	ug/l	0.0005	0.0002		8
242	Mercury	1/7/2003		0.013	ug/l	0.0005	0.0002		8
243	Mercury	7/31/2003		0.013	ug/l	0.0005	0.0002		8
244	Mercury	5/9/2002		0.016	ug/l	0.0005	0.0002		8

663	2-Methyl-4,6-Dinitrophenol	1/9/2002	ND	0.4	ug/l	5	0.4		48
846	2-Chloronaphthalene	1/9/2002	ND	0.3	ug/l	5	0.3		71
847	2-Chloronaphthalene	7/18/2002	ND	0.5	ug/l	5	0.5		71
848	2-Chloronaphthalene	1/16/2003	ND	0.5	ug/l	5	0.5		71
849	2-Chloronaphthalene	8/14/2003	ND	0.5	ug/l	5	0.5		71
850	2-Chloronaphthalene	8/28/2003	ND	0.5	ug/l	5	0.5		71
851	2-Chloronaphthalene	1/15/2004	ND	0.5	ug/l	5	0.5		71
852	2-Chloronaphthalene	7/16/2004	ND	0.5	ug/l	5	0.5		71
853	2-Chloronaphthalene	1/13/2005	ND	0.6	ug/l	5	0.6		71
854	4-Chlorophenyl Phenyl Ether	1/9/2002	ND	0.4	ug/l	5	0.4		72
855	4-Chlorophenyl Phenyl Ether	7/18/2002	ND	0.5	ug/l	5	0.5		72
856	4-Chlorophenyl Phenyl Ether	1/16/2003	ND	0.5	ug/l	5	0.5		72
857	4-Chlorophenyl Phenyl Ether	8/14/2003	ND	0.5	ug/l	5	0.5		72
858	4-Chlorophenyl Phenyl Ether	8/28/2003	ND	0.5	ug/l	5	0.5		72
859	4-Chlorophenyl Phenyl Ether	1/15/2004	ND	0.5	ug/l	5	0.5		72
860	4-Chlorophenyl Phenyl Ether	7/16/2004	ND	0.5	ug/l	5	0.5		72
861	4-Chlorophenyl Phenyl Ether	1/13/2005	ND	2	ug/l	5	2		72
862	Chrysene	1/13/2005	ND	0.041	ug/l	0.31	0.041		73
863	Chrysene	1/9/2002	ND	0.14	ug/l	0.3	0.14		73
864	Chrysene	7/24/2002	ND	0.14	ug/l	0.3	0.14		73
865	Chrysene	1/16/2003	ND	0.14	ug/l	0.3	0.14		73
866	Chrysene	8/14/2003	ND	0.14	ug/l	0.3	0.14		73
867	Chrysene	8/28/2003	ND	0.14	ug/l	0.3	0.14		73
868	Chrysene	1/15/2004	ND	0.14	ug/l	0.3	0.14		73
869	Chrysene	7/16/2004	ND	0.14	ug/l	0.3	0.14		73
870	Dibenzo(a,h)Anthracene	1/13/2005	ND	0.031	ug/l	0.1	0.031		74
871	Dibenzo(a,h)Anthracene	1/9/2002	ND	0.04	ug/l	0.1	0.04		74
872	Dibenzo(a,h)Anthracene	7/24/2002	ND	0.04	ug/l	0.1	0.04		74
873	Dibenzo(a,h)Anthracene	1/16/2003	ND	0.04	ug/l	0.1	0.04		74
874	Dibenzo(a,h)Anthracene	8/14/2003	ND	0.04	ug/l	0.1	0.04		74
875	Dibenzo(a,h)Anthracene	8/28/2003	ND	0.04	ug/l	0.1	0.04		74
876	Dibenzo(a,h)Anthracene	1/15/2004	ND	0.04	ug/l	0.1	0.04		74
877	Dibenzo(a,h)Anthracene	7/16/2004	ND	0.04	ug/l	0.1	0.04		74
878	1,2-Dichlorobenzene	1/9/2002	ND	0.12	ug/l	0.5	0.12		75
879	1,2-Dichlorobenzene	8/6/2002	ND	0.2	ug/l	0.5	0.2		75
880	1,2-Dichlorobenzene	1/15/2004	ND	0.2	ug/l	0.5	0.2		75
881	1,2-Dichlorobenzene	1/13/2005	ND	0.4	ug/l	2	0.4		75
882	1,2-Dichlorobenzene	7/18/2002	ND	0.6	ug/l	2	0.6		75
883	1,2-Dichlorobenzene	1/16/2003	ND	0.6	ug/l	2	0.6		75
884	1,2-Dichlorobenzene	8/14/2003	ND	0.6	ug/l	2	0.6		75
885	1,2-Dichlorobenzene	8/28/2003	ND	0.6	ug/l	2	0.6		75
886	1,2-Dichlorobenzene	7/16/2004	ND	0.6	ug/l	2	0.6		75
887	1,3-Dichlorobenzene	1/9/2002	ND	0.16	ug/l	0.5	0.16		76
888	1,3-Dichlorobenzene	8/6/2002	ND	0.3	ug/l	0.5	0.3		76
889	1,3-Dichlorobenzene	1/15/2004	ND	0.3	ug/l	0.5	0.3		76
890	1,3-Dichlorobenzene	7/16/2004	ND	0.3	ug/l	0.5	0.3		76
891	1,3-Dichlorobenzene	7/18/2002	ND	0.6	ug/l	1	0.6		76
892	1,3-Dichlorobenzene	1/16/2003	ND	0.6	ug/l	1	0.6		76
893	1,3-Dichlorobenzene	8/14/2003	ND	0.6	ug/l	1	0.6		76
894	1,3-Dichlorobenzene	8/28/2003	ND	0.6	ug/l	1	0.6		76
895	1,3-Dichlorobenzene	1/13/2005	ND	0.99	ug/l	1	0.99		76
896	1,4-Dichlorobenzene	1/9/2002	ND	0.12	ug/l	0.5	0.12		77
897	1,4-Dichlorobenzene	8/6/2002	ND	0.3	ug/l	0.5	0.3		77
898	1,4-Dichlorobenzene	1/16/2003	ND	0.3	ug/l	0.5	0.3		77
899	1,4-Dichlorobenzene	8/28/2003	ND	0.3	ug/l	0.5	0.3		77
900	1,4-Dichlorobenzene	1/15/2004	ND	0.3	ug/l	0.5	0.3		77
901	1,4-Dichlorobenzene	7/16/2004	ND	0.3	ug/l	0.5	0.3		77
902	1,4-Dichlorobenzene	7/18/2002	ND	0.6	ug/l	1	0.6		77
903	1,4-Dichlorobenzene	8/14/2003	ND	0.6	ug/l	1	0.6		77
904	1,4-Dichlorobenzene	1/13/2005	ND	0.96	ug/l	1	0.96		77
905	3,3'-Dichlorobenzidine	7/18/2002	ND	0.3	ug/l	5	0.3		78
906	3,3'-Dichlorobenzidine	1/16/2003	ND	0.3	ug/l	5	0.3		78

1	Antinomy	8/7/2002	ND	0.2	ug/l	5	0.2		1
245	Mercury	9/11/2003		0.017	ug/l	0.0005	0.0002		8
246	Mercury	1/9/2002		0.018	ug/l	0.0005	0.0002		8
247	Mercury	4/11/2002		0.019	ug/l	0.0005	0.0002		8
248	Mercury	2/12/2004		0.02	ug/l	0.0005	0.0002		8
249	Mercury	8/6/2002		0.021	ug/l	0.0005	0.0002		8
250	Mercury	4/22/2004		0.022	ug/l	0.0005	0.0002		8
251	Mercury	7/16/2004		0.026	ug/l	0.0005	0.0002		8
252	Mercury	7/18/2002		0.03	ug/l	0.0005	0.0002		8
253	Mercury	2/15/2002		0.032	ug/l	0.0005	0.0002		8
254	Mercury	3/11/2004		0.045	ug/l	0.0005	0.0002		8
255	Mercury	3/14/2002		0.046	ug/l	0.0005	0.0002		8
256	Mercury	6/4/2004		0.061	ug/l	0.0005	0.0002		8
257	Mercury	5/7/2004		0.082	ug/l	0.0005	0.0002		8
258	Nickel	1/16/2004		10	ug/l	1	0.2		9
259	Nickel	2/13/2004		10	ug/l	2.5	0.2		9
260	Nickel	7/16/2004		10	ug/l	1	0.2		9
261	Nickel	3/12/2004		11	ug/l	1	0.2		9
262	Nickel	6/4/2004		11	ug/l	2.5	0.2		9
263	Nickel	12/11/2002		13	ug/l	1	0.2		9
264	Nickel	9/13/2002		14	ug/l	2.5	0.2		9
265	Nickel	4/12/2002		15	ug/l	2.5	0.2		9
266	Nickel	7/19/2002		15	ug/l	1	0.2		9
267	Nickel	8/7/2002		15	ug/l	5	0.2		9
268	Nickel	1/8/2003		16	ug/l	0.5	0.2		9
269	Nickel	10/11/2002		17	ug/l	5	0.2		9
270	Nickel	12/5/2003		18	ug/l	2.5	0.2		9
271	Nickel	5/24/2002		19	ug/l	1	0.2		9
272	Nickel	11/7/2003		19	ug/l	2.5	0.2		9
273	Nickel	4/23/2004		19	ug/l	0.5	0.2		9
274	Nickel	4/11/2003		20	ug/l	1	0.2		9
275	Nickel	5/9/2003		24	ug/l	1	0.2		9
276	Nickel	6/7/2002		26	ug/l	1	0.2		9
277	Nickel	11/8/2002		27	ug/l	1	0.2		9
278	Nickel	2/14/2003		28	ug/l	1	0.2		9
279	Nickel	5/7/2004		28	ug/l	2.5	0.2		9
280	Nickel	3/15/2002		29	ug/l	0.5	0.2		9
281	Nickel	10/10/2003		31	ug/l	2.5	0.2		9
282	Nickel	8/29/2003		32	ug/l	2.5	0.2		9
283	Nickel	9/12/2003		33	ug/l	2.5	0.2		9
284	Nickel	3/14/2003		38	ug/l	2.5	0.2		9
285	Nickel	7/3/2003		47	ug/l	2.5	0.2		9
286	Nickel	8/1/2003		51	ug/l	2.5	0.2		9
287	Nickel	1/9/2002		56	ug/l	0.5	0.2		9
288	Nickel	6/6/2003		61	ug/l	2.5	0.2		9
289	Nickel	2/15/2002		160	ug/l	1	0.2		9
290	Selenium	8/1/2003	ND	0.5	ug/l	5	0.5		10
291	Selenium	9/12/2003	ND	0.5	ug/l	5	0.5		10
292	Selenium	12/5/2003	ND	0.5	ug/l	5	0.5		10
293	Selenium	1/16/2004	ND	0.5	ug/l	5	0.5		10
294	Selenium	3/12/2004	J	0.6	ug/l	1	0.5		10
295	Selenium	1/8/2003		2	ug/l	1	0.5		10
296	Selenium	11/7/2003		2.7	ug/l	2.5	0.5		10
297	Selenium	5/9/2003		3	ug/l	1	0.5		10
298	Selenium	4/23/2004		4	ug/l	1	0.5		10
299	Selenium	3/15/2002		5	ug/l	2	0.5		10
300	Selenium	2/15/2002		6	ug/l	1	0.3		10
301	Selenium	5/24/2002		6	ug/l	3	0.5		10
302	Selenium	3/14/2003		7	ug/l	2	0.5		10
303	Selenium	7/3/2003		7	ug/l	2	0.5		10
304	Selenium	8/29/2003		7	ug/l	5	0.5		10
305	Selenium	2/13/2004		7	ug/l	5	0.5		10

663	2-Methyl-4,6-Dinitrophenol	1/9/2002	ND	0.4	ug/l	5	0.4		48
907	3,3'-Dichlorobenzidine	8/14/2003	ND	0.3	ug/l	5	0.3		78
908	3,3'-Dichlorobenzidine	8/28/2003	ND	0.3	ug/l	5	0.3		78
909	3,3'-Dichlorobenzidine	1/15/2004	ND	0.3	ug/l	5	0.3		78
910	3,3'-Dichlorobenzidine	7/16/2004	ND	0.3	ug/l	5	0.3		78
911	3,3'-Dichlorobenzidine	1/9/2002	ND	0.4	ug/l	5	0.4		78
912	3,3'-Dichlorobenzidine	1/13/2005	ND	0.6	ug/l	5	0.6		78
913	Diethyl Phthalate	1/9/2002	ND	0.4	ug/l	2	0.4		79
914	Diethyl Phthalate	7/18/2002	ND	0.7	ug/l	2	0.7		79
915	Diethyl Phthalate	1/16/2003	ND	0.7	ug/l	2	0.7		79
916	Diethyl Phthalate	8/14/2003	ND	0.7	ug/l	2	0.7		79
917	Diethyl Phthalate	8/28/2003	ND	0.7	ug/l	2	0.7		79
918	Diethyl Phthalate	1/15/2004	ND	0.7	ug/l	2	0.7		79
919	Diethyl Phthalate	7/16/2004	ND	0.7	ug/l	2	0.7		79
920	Diethyl Phthalate	1/13/2005	ND	0.9	ug/l	2	0.9		79
921	Dimethyl Phthalate	1/9/2002	ND	0.4	ug/l	2	0.4		80
922	Dimethyl Phthalate	1/13/2005	ND	0.6	ug/l	2	0.6		80
923	Dimethyl Phthalate	7/18/2002	ND	0.7	ug/l	2	0.7		80
924	Dimethyl Phthalate	1/16/2003	ND	0.7	ug/l	2	0.7		80
925	Dimethyl Phthalate	8/14/2003	ND	0.7	ug/l	2	0.7		80
926	Dimethyl Phthalate	8/28/2003	ND	0.7	ug/l	2	0.7		80
927	Dimethyl Phthalate	1/15/2004	ND	0.7	ug/l	2	0.7		80
928	Dimethyl Phthalate	7/16/2004	ND	0.7	ug/l	2	0.7		80
929	Di-n-Butyl Phthalate	1/9/2002	ND	0.4	ug/l	5	0.4		81
930	Di-n-Butyl Phthalate	1/13/2005	ND	0.6	ug/l	5	0.6		81
931	Di-n-Butyl Phthalate	7/18/2002	ND	1	ug/l	5	1		81
932	Di-n-Butyl Phthalate	1/16/2003	ND	1	ug/l	5	1		81
933	Di-n-Butyl Phthalate	8/14/2003	ND	1	ug/l	5	1		81
934	Di-n-Butyl Phthalate	8/28/2003	ND	1	ug/l	5	1		81
935	Di-n-Butyl Phthalate	1/15/2004	ND	1	ug/l	5	1		81
936	Di-n-Butyl Phthalate	7/16/2004	ND	1	ug/l	5	1		81
937	2,4-Dinitrotoluene	1/9/2002	ND	0.3	ug/l	5	0.3		82
938	2,4-Dinitrotoluene	7/18/2002	ND	0.6	ug/l	5	0.6		82
939	2,4-Dinitrotoluene	1/16/2003	ND	0.6	ug/l	5	0.6		82
940	2,4-Dinitrotoluene	8/14/2003	ND	0.6	ug/l	5	0.6		82
941	2,4-Dinitrotoluene	8/28/2003	ND	0.6	ug/l	5	0.6		82
942	2,4-Dinitrotoluene	1/15/2004	ND	0.6	ug/l	5	0.6		82
943	2,4-Dinitrotoluene	7/16/2004	ND	0.6	ug/l	5	0.6		82
944	2,4-Dinitrotoluene	1/13/2005	ND	0.9	ug/l	5	0.9		82
945	2,6-Dinitrotoluene	1/9/2002	ND	0.3	ug/l	5	0.3		83
946	2,6-Dinitrotoluene	1/13/2005	ND	0.5	ug/l	5	0.5		83
947	2,6-Dinitrotoluene	7/18/2002	ND	0.6	ug/l	5	0.6		83
948	2,6-Dinitrotoluene	1/16/2003	ND	0.6	ug/l	5	0.6		83
949	2,6-Dinitrotoluene	8/14/2003	ND	0.6	ug/l	5	0.6		83
950	2,6-Dinitrotoluene	8/28/2003	ND	0.6	ug/l	5	0.6		83
951	2,6-Dinitrotoluene	1/15/2004	ND	0.6	ug/l	5	0.6		83
952	2,6-Dinitrotoluene	7/16/2004	ND	0.6	ug/l	5	0.6		83
953	Di-n-Octyl Phthalate	1/9/2002	ND	0.4	ug/l	5	0.4		84
954	Di-n-Octyl Phthalate	1/13/2005	ND	0.7	ug/l	5	0.7		84
955	Di-n-Octyl Phthalate	7/18/2002	ND	0.9	ug/l	5	0.9		84
956	Di-n-Octyl Phthalate	1/16/2003	ND	0.9	ug/l	5	0.9		84
957	Di-n-Octyl Phthalate	8/14/2003	ND	0.9	ug/l	5	0.9		84
958	Di-n-Octyl Phthalate	8/28/2003	ND	0.9	ug/l	5	0.9		84
959	Di-n-Octyl Phthalate	1/15/2004	ND	0.9	ug/l	5	0.9		84
960	Di-n-Octyl Phthalate	7/16/2004	ND	0.9	ug/l	5	0.9		84
961	1,2-Diphenylhydrazine	1/9/2002	ND	0.3	ug/l	1	0.3		85
962	1,2-Diphenylhydrazine	7/18/2002	ND	0.6	ug/l	1	0.6		85
963	1,2-Diphenylhydrazine	1/16/2003	ND	0.6	ug/l	1	0.6		85
964	1,2-Diphenylhydrazine	8/14/2003	ND	0.6	ug/l	1	0.6		85
965	1,2-Diphenylhydrazine	8/28/2003	ND	0.6	ug/l	1	0.6		85
966	1,2-Diphenylhydrazine	1/15/2004	ND	0.6	ug/l	1	0.6		85
967	1,2-Diphenylhydrazine	7/16/2004	ND	0.6	ug/l	1	0.6		85

1	Antinomy	8/7/2002	ND	0.2	ug/l	5	0.2		1
306	Selenium	6/7/2002		9	ug/l	2	0.5		10
307	Selenium	7/19/2002		9	ug/l	3	0.5		10
308	Selenium	2/14/2003		9	ug/l	5	0.5		10
309	Selenium	5/7/2004		9	ug/l	3	0.5		10
310	Selenium	8/7/2002		10	ug/l	5	0.5		10
311	Selenium	6/4/2004		10	ug/l	5	0.5		10
312	Selenium	4/12/2002		12	ug/l	5	0.5		10
313	Selenium	9/13/2002		12	ug/l	3	0.5		10
314	Selenium	11/8/2002		12	ug/l	3	0.5		10
315	Selenium	10/10/2003		12	ug/l	5	0.5		10
316	Selenium	10/11/2002		13	ug/l	3	0.5		10
317	Selenium	12/11/2002		13	ug/l	2.5	0.5		10
318	Selenium	6/6/2003		16	ug/l	3	0.5		10
319	Selenium	7/16/2004		17	ug/l	4	0.5		10
320	Selenium	1/9/2002		21	ug/l	1	0.3		10
321	Selenium	4/11/2003		26	ug/l	1	0.5		10
322	Silver	2/15/2002	ND	0.02	ug/l	0.1	0.02		11
323	Silver	3/15/2002	ND	0.02	ug/l	0.1	0.02		11
324	Silver	4/12/2002	ND	0.02	ug/l	0.5	0.02		11
325	Silver	5/24/2002	ND	0.02	ug/l	0.2	0.02		11
326	Silver	6/7/2002	ND	0.02	ug/l	0.2	0.02		11
327	Silver	7/19/2002	ND	0.02	ug/l	0.2	0.02		11
328	Silver	8/7/2002	ND	0.02	ug/l	1	0.02		11
329	Silver	9/13/2002	ND	0.02	ug/l	0.5	0.02		11
330	Silver	10/11/2002	ND	0.02	ug/l	1	0.02		11
331	Silver	11/8/2002	ND	0.02	ug/l	0.2	0.02		11
332	Silver	12/11/2002	ND	0.02	ug/l	0.2	0.02		11
333	Silver	2/14/2003	ND	0.02	ug/l	0.2	0.02		11
334	Silver	3/14/2003	ND	0.02	ug/l	0.2	0.02		11
335	Silver	4/11/2003	ND	0.02	ug/l	0.2	0.02		11
336	Silver	5/9/2003	ND	0.02	ug/l	0.2	0.02		11
337	Silver	6/6/2003	ND	0.02	ug/l	0.5	0.02		11
338	Silver	7/3/2003	ND	0.02	ug/l	0.5	0.02		11
339	Silver	8/1/2003	ND	0.02	ug/l	0.5	0.02		11
340	Silver	8/29/2003	ND	0.02	ug/l	0.5	0.02		11
341	Silver	9/12/2003	ND	0.02	ug/l	0.5	0.02		11
342	Silver	10/10/2003	ND	0.02	ug/l	0.5	0.02		11
343	Silver	11/7/2003	ND	0.02	ug/l	0.5	0.02		11
344	Silver	12/5/2003	ND	0.02	ug/l	0.5	0.02		11
345	Silver	1/16/2004	ND	0.02	ug/l	0.2	0.02		11
346	Silver	2/13/2004	ND	0.02	ug/l	0.5	0.02		11
347	Silver	3/12/2004	ND	0.02	ug/l	0.1	0.02		11
348	Silver	4/23/2004	ND	0.02	ug/l	0.1	0.02		11
349	Silver	5/7/2004	ND	0.02	ug/l	0.5	0.02		11
350	Silver	6/4/2004	ND	0.02	ug/l	0.5	0.02		11
351	Silver	7/16/2004	ND	0.02	ug/l	0.2	0.02		11
352	Silver	1/8/2003	J	0.02	ug/l	0.1	0.02		11
353	Silver	1/9/2002	J	0.03	ug/l	0.1	0.02		11
354	Thallium	04/12/2002	ND	0.03	ug/L	0.5	0.03		12
355	Thallium	05/24/2002	ND	0.03	ug/L	0.2	0.03		12
356	Thallium	06/07/2002	ND	0.03	ug/L	0.2	0.03		12
357	Thallium	07/19/2002	ND	0.03	ug/L	0.5	0.03		12
358	Thallium	08/07/2002	ND	0.03	ug/L	1	0.03		12
359	Thallium	09/13/2002	ND	0.03	ug/L	0.5	0.03		12
360	Thallium	10/11/2002	ND	0.03	ug/L	1	0.03		12
361	Thallium	11/08/2002	ND	0.03	ug/L	0.2	0.03		12
362	Thallium	12/11/2002	ND	0.03	ug/L	0.2	0.03		12
363	Thallium	01/08/2003	ND	0.03	ug/L	0.1	0.03		12
364	Thallium	02/14/2003	ND	0.03	ug/L	0.2	0.03		12
365	Thallium	03/14/2003	ND	0.03	ug/L	0.2	0.03		12
366	Thallium	04/11/2003	ND	0.03	ug/L	0.2	0.03		12

663	2-Methyl-4,6-Dinitrophenol	1/9/2002	ND	0.4	ug/l	5	0.4		48
968	1,2-Diphenylhydrazine	1/13/2005	ND	0.9	ug/l	1	0.9		85
969	Fluoranthene	1/9/2002	ND	0.03	ug/l	0.05	0.03		86
970	Fluoranthene	7/24/2002	ND	0.03	ug/l	0.05	0.03		86
971	Fluoranthene	1/16/2003	ND	0.03	ug/l	0.05	0.03		86
972	Fluoranthene	8/14/2003	ND	0.03	ug/l	0.05	0.03		86
973	Fluoranthene	8/28/2003	ND	0.03	ug/l	0.05	0.03		86
974	Fluoranthene	1/15/2004	ND	0.03	ug/l	0.05	0.03		86
975	Fluoranthene	7/16/2004	ND	0.03	ug/l	0.05	0.03		86
976	Fluoranthene	1/13/2005	ND	0.031	ug/l	0.05	0.031		86
977	Fluorene	1/9/2002	ND	0.02	ug/l	0.1	0.02		87
978	Fluorene	7/24/2002	ND	0.02	ug/l	0.1	0.02		87
979	Fluorene	1/16/2003	ND	0.02	ug/l	0.1	0.02		87
980	Fluorene	8/14/2003	ND	0.02	ug/l	0.1	0.02		87
981	Fluorene	8/28/2003	ND	0.02	ug/l	0.1	0.02		87
982	Fluorene	1/15/2004	ND	0.02	ug/l	0.1	0.02		87
983	Fluorene	7/16/2004	ND	0.02	ug/l	0.1	0.02		87
984	Fluorene	1/13/2005	ND	0.031	ug/l	0.1	0.031		87
985	Hexachlorobenzene	1/9/2002	ND	0.4	ug/l	1	0.4		88
986	Hexachlorobenzene	7/18/2002	ND	0.4	ug/l	1	0.4		88
987	Hexachlorobenzene	1/16/2003	ND	0.4	ug/l	1	0.4		88
988	Hexachlorobenzene	8/14/2003	ND	0.4	ug/l	1	0.4		88
989	Hexachlorobenzene	8/28/2003	ND	0.4	ug/l	1	0.4		88
990	Hexachlorobenzene	1/15/2004	ND	0.4	ug/l	1	0.4		88
991	Hexachlorobenzene	7/16/2004	ND	0.4	ug/l	1	0.4		88
992	Hexachlorobenzene	1/13/2005	ND	0.8	ug/l	1	0.8		88
993	Hexachlorobutadiene	1/9/2002	ND	0.2	ug/l	1	0.2		89
994	Hexachlorobutadiene	7/18/2002	ND	0.7	ug/l	1	0.7		89
995	Hexachlorobutadiene	1/16/2003	ND	0.7	ug/l	1	0.7		89
996	Hexachlorobutadiene	8/14/2003	ND	0.7	ug/l	1	0.7		89
997	Hexachlorobutadiene	8/28/2003	ND	0.7	ug/l	1	0.7		89
998	Hexachlorobutadiene	1/15/2004	ND	0.7	ug/l	1	0.7		89
999	Hexachlorobutadiene	7/16/2004	ND	0.7	ug/l	1	0.7		89
1000	Hexachlorobutadiene	1/13/2005	ND	0.8	ug/l	1	0.8		89
1001	Hexachlorocyclopentadiene	1/9/2002	ND	0.1	ug/l	5	0.1		90
1002	Hexachlorocyclopentadiene	7/18/2002	ND	0.4	ug/l	5	0.4		90
1003	Hexachlorocyclopentadiene	1/16/2003	ND	0.4	ug/l	5	0.4		90
1004	Hexachlorocyclopentadiene	8/14/2003	ND	0.4	ug/l	5	0.4		90
1005	Hexachlorocyclopentadiene	8/28/2003	ND	0.4	ug/l	5	0.4		90
1006	Hexachlorocyclopentadiene	1/15/2004	ND	0.4	ug/l	5	0.4		90
1007	Hexachlorocyclopentadiene	7/16/2004	ND	0.4	ug/l	5	0.4		90
1008	Hexachlorocyclopentadiene	1/13/2005	ND	0.8	ug/l	1	0.8		90
1009	Hexachloroethane	1/9/2002	ND	0.2	ug/l	1	0.2		91
1010	Hexachloroethane	7/18/2002	ND	0.6	ug/l	1	0.6		91
1011	Hexachloroethane	1/16/2003	ND	0.6	ug/l	1	0.6		91
1012	Hexachloroethane	8/14/2003	ND	0.6	ug/l	1	0.6		91
1013	Hexachloroethane	8/28/2003	ND	0.6	ug/l	1	0.6		91
1014	Hexachloroethane	1/15/2004	ND	0.6	ug/l	1	0.6		91
1015	Hexachloroethane	7/16/2004	ND	0.6	ug/l	1	0.6		91
1016	Hexachloroethane	1/13/2005	ND	0.9	ug/l	1	0.9		91
1017	Indeno(1,2,3-cd) Pyrene	1/13/2005	ND	0.031	ug/l	0.05	0.031		92
1018	Indeno(1,2,3-cd) Pyrene	1/9/2002	ND	0.04	ug/l	0.05	0.04		92
1019	Indeno(1,2,3-cd) Pyrene	7/24/2002	ND	0.04	ug/l	0.05	0.04		92
1020	Indeno(1,2,3-cd) Pyrene	1/16/2003	ND	0.04	ug/l	0.05	0.04		92
1021	Indeno(1,2,3-cd) Pyrene	8/14/2003	ND	0.04	ug/l	0.05	0.04		92
1022	Indeno(1,2,3-cd) Pyrene	8/28/2003	ND	0.04	ug/l	0.05	0.04		92
1023	Indeno(1,2,3-cd) Pyrene	1/15/2004	ND	0.04	ug/l	0.05	0.04		92
1024	Indeno(1,2,3-cd) Pyrene	7/16/2004	ND	0.04	ug/l	0.05	0.04		92
1025	Isophorone	1/9/2002	ND	0.3	ug/l	1	0.3		93
1026	Isophorone	1/13/2005	ND	0.5	ug/l	1	0.5		93
1027	Isophorone	7/18/2002	ND	0.8	ug/l	1	0.8		93
1028	Isophorone	1/16/2003	ND	0.8	ug/l	1	0.8		93

1	Antinomy	8/7/2002	ND	0.2	ug/l	5	0.2		1
367	Thallium	05/09/2003	ND	0.03	ug/L	0.2	0.03		12
368	Thallium	07/03/2003	ND	0.03	ug/L	0.5	0.03		12
369	Thallium	08/01/2003	ND	0.03	ug/L	0.5	0.03		12
370	Thallium	08/29/2003	ND	0.03	ug/L	0.5	0.03		12
371	Thallium	09/12/2003	ND	0.03	ug/L	0.5	0.03		12
372	Thallium	10/10/2003	ND	0.03	ug/L	0.5	0.03		12
373	Thallium	11/07/2003	ND	0.03	ug/L	0.5	0.03		12
374	Thallium	12/05/2003	ND	0.03	ug/L	0.5	0.03		12
375	Thallium	01/16/2004	ND	0.03	ug/L	0.2	0.03		12
376	Thallium	02/13/2004	ND	0.03	ug/L	0.5	0.03		12
377	Thallium	02/13/2004	ND	0.03	ug/L	0.5	0.03		12
378	Thallium	03/12/2004	ND	0.03	ug/L	0.1	0.03		12
379	Thallium	04/23/2004	ND	0.03	ug/L	0.1	0.03		12
380	Thallium	05/07/2004	ND	0.03	ug/L	0.5	0.03		12
381	Thallium	01/09/2002	J	0.04	ug/L	0.1	0.03		12
382	Thallium	02/15/2002	J	0.07	ug/L	0.1	0.03		12
383	Thallium	03/15/2002	J	0.1	ug/L	0.2	0.03		12
384	Thallium	06/06/2003	J	0.18	ug/L	0.2	0.03		12
385	Zinc	6/4/2004	J	4	ug/l	5	0.3		13
386	Zinc	2/13/2004	J	9	ug/l	10	0.3		13
387	Zinc	1/16/2004		9	ug/l	4	0.3		13
388	Zinc	7/16/2004		9	ug/l	2	0.3		13
389	Zinc	3/12/2004		11	ug/l	2	0.3		13
390	Zinc	4/23/2004		13	ug/l	2	0.3		13
391	Zinc	11/7/2003		17	ug/l	5	0.3		13
392	Zinc	12/5/2003		20	ug/l	10	0.3		13
393	Zinc	10/10/2003		21	ug/l	5	0.3		13
394	Zinc	4/11/2003		26	ug/l	2	0.3		13
395	Zinc	5/9/2003		29	ug/l	4	0.3		13
396	Zinc	9/12/2003		37	ug/l	5	0.3		13
397	Zinc	8/7/2002		40	ug/l	20	0.3		13
398	Zinc	8/29/2003		42	ug/l	5	0.3		13
399	Zinc	9/13/2002		46	ug/l	5	0.3		13
400	Zinc	6/6/2003		50	ug/l	10	0.3		13
401	Zinc	5/7/2004		51	ug/l	5	0.3		13
402	Zinc	8/1/2003		60	ug/l	10	0.3		13
403	Zinc	7/19/2002		67	ug/l	2	0.3		13
404	Zinc	10/11/2002		80	ug/l	20	0.3		13
405	Zinc	3/14/2003		95	ug/l	4	0.3		13
406	Zinc	1/9/2002		110	ug/l	1	0.5		13
407	Zinc	5/24/2002		120	ug/l	4	0.5		13
408	Zinc	2/14/2003		120	ug/l	2	0.3		13
409	Zinc	3/15/2002		140	ug/l	1	0.5		13
410	Zinc	11/8/2002		140	ug/l	4	0.3		13
411	Zinc	6/7/2002		150	ug/l	2	0.3		13
412	Zinc	7/3/2003		180	ug/l	10	0.3		13
413	Zinc	2/15/2002		190	ug/l	2	0.5		13
414	Zinc	12/11/2002		190	ug/l	4	0.3		13
415	Zinc	1/8/2003		190	ug/l	2	0.3		13
416	Zinc	4/12/2002		220	ug/l	10	0.5		13
417	Cyanide	2/15/2002	ND	0.6	ug/l	3	0.6		14
418	Cyanide	3/14/2002	ND	0.6	ug/l	3	0.6		14
419	Cyanide	4/11/2002	ND	0.6	ug/l	3	0.6		14
420	Cyanide	5/9/2002	ND	0.6	ug/l	3	0.6		14
421	Cyanide	6/6/2002	ND	0.8	ug/l	3	0.8		14
422	Cyanide	9/13/2002	ND	0.9	ug/l	3	0.9		14
423	Cyanide	10/10/2002	ND	0.9	ug/l	3	0.9		14
424	Cyanide	11/7/2002	ND	0.9	ug/l	3	0.9		14
425	Cyanide	12/10/2002	ND	0.9	ug/l	3	0.9		14
426	Cyanide	2/13/2003	ND	0.9	ug/l	3	0.9		14
427	Cyanide	3/13/2003	ND	0.9	ug/l	3	0.9		14

663	2-Methyl-4,6-Dinitrophenol	1/9/2002	ND	0.4	ug/l	5	0.4		48
1029	Isophorone	8/14/2003	ND	0.8	ug/l	1	0.8		93
1030	Isophorone	8/28/2003	ND	0.8	ug/l	1	0.8		93
1031	Isophorone	1/15/2004	ND	0.8	ug/l	1	0.8		93
1032	Isophorone	7/16/2004	ND	0.8	ug/l	1	0.8		93
1033	Naphthalene	1/13/2005	ND	0.02	ug/l	0.2	0.02		94
1034	Naphthalene	1/9/2002	ND	0.05	ug/l	0.2	0.05		94
1035	Naphthalene	1/16/2003	ND	0.05	ug/l	0.2	0.05		94
1036	Naphthalene	8/14/2003	ND	0.05	ug/l	0.2	0.05		94
1037	Naphthalene	8/28/2003	ND	0.05	ug/l	0.2	0.05		94
1038	Naphthalene	1/15/2004	ND	0.05	ug/l	0.2	0.05		94
1039	Naphthalene	7/16/2004	ND	0.05	ug/l	0.2	0.05		94
1040	Naphthalene	7/24/2002	ND	0.16	ug/l	0.2	0.16		94
1041	Nitrobenzene	1/9/2002	ND	0.3	ug/l	1	0.3		95
1042	Nitrobenzene	7/18/2002	ND	0.7	ug/l	1	0.7		95
1043	Nitrobenzene	1/16/2003	ND	0.7	ug/l	1	0.7		95
1044	Nitrobenzene	8/14/2003	ND	0.7	ug/l	1	0.7		95
1045	Nitrobenzene	8/28/2003	ND	0.7	ug/l	1	0.7		95
1046	Nitrobenzene	1/15/2004	ND	0.7	ug/l	1	0.7		95
1047	Nitrobenzene	7/16/2004	ND	0.7	ug/l	1	0.7		95
1048	Nitrobenzene	1/13/2005	ND	0.7	ug/l	1	0.7		95
1049	N-Nitrosodimethylamine	1/9/2002	ND	0.4	ug/l	5	0.4		96
1050	N-Nitrosodimethylamine	7/18/2002	ND	0.6	ug/l	5	0.6		96
1051	N-Nitrosodimethylamine	1/16/2003	ND	0.6	ug/l	5	0.6		96
1052	N-Nitrosodimethylamine	8/14/2003	ND	0.6	ug/l	5	0.6		96
1053	N-Nitrosodimethylamine	8/28/2003	ND	0.6	ug/l	5	0.6		96
1054	N-Nitrosodimethylamine	1/15/2004	ND	0.6	ug/l	5	0.6		96
1055	N-Nitrosodimethylamine	7/16/2004	ND	0.6	ug/l	5	0.6		96
1056	N-Nitrosodimethylamine	1/13/2005	ND	0.6	ug/l	5	0.6		96
1057	N-Nitrosodi-n-Propylamine	1/9/2002	ND	0.3	ug/l	5	0.3		97
1058	N-Nitrosodi-n-Propylamine	7/18/2002	ND	0.8	ug/l	5	0.8		97
1059	N-Nitrosodi-n-Propylamine	1/16/2003	ND	0.8	ug/l	5	0.8		97
1060	N-Nitrosodi-n-Propylamine	8/14/2003	ND	0.8	ug/l	5	0.8		97
1061	N-Nitrosodi-n-Propylamine	8/28/2003	ND	0.8	ug/l	5	0.8		97
1062	N-Nitrosodi-n-Propylamine	1/15/2004	ND	0.8	ug/l	5	0.8		97
1063	N-Nitrosodi-n-Propylamine	7/16/2004	ND	0.8	ug/l	5	0.8		97
1064	N-Nitrosodi-n-Propylamine	1/13/2005	ND	0.8	ug/l	5	0.8		97
1065	N-Nitrosodiphenylamine	1/9/2002	ND	0.4	ug/l	1	0.4		98
1066	N-Nitrosodiphenylamine	1/13/2005	ND	0.6	ug/l	1	0.6		98
1067	N-Nitrosodiphenylamine	7/18/2002	ND	0.7	ug/l	1	0.7		98
1068	N-Nitrosodiphenylamine	1/16/2003	ND	0.7	ug/l	1	0.7		98
1069	N-Nitrosodiphenylamine	8/14/2003	ND	0.7	ug/l	1	0.7		98
1070	N-Nitrosodiphenylamine	8/28/2003	ND	0.7	ug/l	1	0.7		98
1071	N-Nitrosodiphenylamine	1/15/2004	ND	0.7	ug/l	1	0.7		98
1072	N-Nitrosodiphenylamine	7/16/2004	ND	0.7	ug/l	1	0.7		98
1073	Phenanthrene	1/9/2002	ND	0.03	ug/l	0.05	0.03		99
1074	Phenanthrene	7/24/2002	ND	0.03	ug/l	0.05	0.03		99
1075	Phenanthrene	1/16/2003	ND	0.03	ug/l	0.05	0.03		99
1076	Phenanthrene	8/14/2003	ND	0.03	ug/l	0.05	0.03		99
1077	Phenanthrene	8/28/2003	ND	0.03	ug/l	0.05	0.03		99
1078	Phenanthrene	1/15/2004	ND	0.03	ug/l	0.05	0.03		99
1079	Phenanthrene	7/16/2004	ND	0.03	ug/l	0.05	0.03		99
1080	Phenanthrene	1/13/2005	ND	0.031	ug/l	0.05	0.031		99
1081	Pyrene	1/9/2002	ND	0.03	ug/l	0.05	0.03		100
1082	Pyrene	7/24/2002	ND	0.03	ug/l	0.05	0.03		100
1083	Pyrene	1/16/2003	ND	0.03	ug/l	0.05	0.03		100
1084	Pyrene	8/14/2003	ND	0.03	ug/l	0.05	0.03		100
1085	Pyrene	8/28/2003	ND	0.03	ug/l	0.05	0.03		100
1086	Pyrene	1/15/2004	ND	0.03	ug/l	0.05	0.03		100
1087	Pyrene	7/16/2004	ND	0.03	ug/l	0.05	0.03		100
1088	Pyrene	1/13/2005	ND	0.031	ug/l	0.05	0.031		100
1089	1,2,4-Trichlorobenzene	1/9/2002	ND	0.3	ug/l	5	0.3		101

1	Antinomy	8/7/2002	ND	0.2	ug/l	5	0.2		1
428	Cyanide	4/10/2003	ND	0.9	ug/l	3	0.9		14
429	Cyanide	6/6/2003	ND	0.9	ug/l	3	0.9		14
430	Cyanide	7/2/2003	ND	0.9	ug/l	3	0.9		14
431	Cyanide	7/31/2003	ND	0.9	ug/l	3	0.9		14
432	Cyanide	8/28/2003	ND	0.9	ug/l	3	0.9		14
433	Cyanide	9/11/2003	ND	0.9	ug/l	3	0.9		14
434	Cyanide	10/9/2003	ND	0.9	ug/l	3	0.9		14
435	Cyanide	12/4/2003	ND	0.9	ug/l	3	0.9		14
436	Cyanide	1/15/2004	ND	0.9	ug/l	3	0.9		14
437	Cyanide	2/12/2004	ND	0.9	ug/l	3	0.9		14
438	Cyanide	3/11/2004	ND	0.9	ug/l	3	0.9		14
439	Cyanide	4/22/2004	ND	0.9	ug/l	3	0.9		14
440	Cyanide	5/7/2004	ND	0.9	ug/l	3	0.9		14
441	Cyanide	7/16/2004	ND	0.9	ug/l	3	0.9		14
442	Cyanide	7/18/2002	ND	1.4	ug/l	3	1.4		14
443	Cyanide	1/9/2002	J	1	ug/l	3	0.6		14
444	Cyanide	1/7/2003	J	1	ug/l	3	0.9		14
445	Cyanide	8/6/2002	J	1.1	ug/l	3	0.9		14
446	Cyanide	11/6/2003	J	1.1	ug/l	3	0.9		14
447	Cyanide	5/8/2003	J	1.7	ug/l	3	0.9		14
448	Cyanide	6/3/2004		4	ug/l	3	0.9		14
449	Dixoin								16
450	Acrolein	1/13/2005	ND	0.56	ug/l	8	0.56		17
451	Acrolein	8/6/2002	ND	1	ug/l	5	1		17
452	Acrolein	1/16/2003	ND	1	ug/l	5	1		17
453	Acrolein	8/28/2003	ND	1	ug/l	5	1		17
454	Acrolein	1/15/2004	ND	1	ug/l	5	1		17
455	Acrolein	7/16/2004	ND	1	ug/l	5	1		17
456	Acrolein	1/9/2002	ND	3.3	ug/l	5	3.3		17
457	Acrylonitr	1/13/2005	ND	0.33	ug/l	2	0.33		18
458	Acrylonitr	8/6/2002	ND	1	ug/l	2	1		18
459	Acrylonitr	1/16/2003	ND	1	ug/l	2	1		18
460	Acrylonitr	8/28/2003	ND	1	ug/l	2	1		18
461	Acrylonitr	1/15/2004	ND	1	ug/l	2	1		18
462	Acrylonitr	7/16/2004	ND	1	ug/l	2	1		18
463	Acrylonitr	1/9/2002	ND	1.6	ug/l	2	1.6		18
464	Benzene	1/13/2005	ND	0.06	ug/l	0.5	0.06		19
465	Benzene	1/9/2002	ND	0.27	ug/l	0.5	0.27		19
466	Benzene	8/28/2003	ND	0.3	ug/l	0.5	0.3		19
467	Benzene	7/16/2004	ND	0.3	ug/l	0.5	0.3		19
468	Benzene	8/6/2002	J	0.4	ug/l	0.5	0.3		19
469	Benzene	1/15/2004		0.6	ug/l	0.5	0.3		19
470	Benzene	1/16/2003		1.6	ug/l	0.5	0.3		19
471	Bromoform	1/13/2005	ND	0.07	ug/l	0.5	0.07		20
472	Bromoform	1/9/2002	ND	0.1	ug/l	0.5	0.1		20
473	Bromoform	8/6/2002	ND	0.2	ug/l	0.5	0.2		20
474	Bromoform	1/16/2003	ND	0.2	ug/l	0.5	0.2		20
475	Bromoform	8/28/2003	ND	0.2	ug/l	0.5	0.2		20
476	Bromoform	1/15/2004	ND	0.2	ug/l	0.5	0.2		20
477	Bromoform	7/16/2004	ND	0.2	ug/l	0.5	0.2		20
478	Carbon Tetrachloride	1/13/2005	ND	0.06	ug/l	0.5	0.06		21
479	Carbon Tetrachloride	1/9/2002	ND	0.42	ug/l	0.5	0.42		21
480	Carbon Tetrachloride	8/6/2002	ND	0.42	ug/l	0.5	0.42		21
481	Carbon Tetrachloride	1/16/2003	ND	0.42	ug/l	0.5	0.42		21
482	Carbon Tetrachloride	8/28/2003	ND	0.42	ug/l	0.5	0.42		21
483	Carbon Tetrachloride	1/15/2004	ND	0.42	ug/l	0.5	0.42		21
484	Carbon Tetrachloride	7/16/2004	ND	0.42	ug/l	0.5	0.42		21
485	Chlorobenzene	1/13/2005	ND	0.06	ug/l	0.5	0.06		22
486	Chlorobenzene	1/9/2002	ND	0.19	ug/l	0.5	0.19		22
487	Chlorobenzene	8/6/2002	ND	0.3	ug/l	0.5	0.3		22
488	Chlorobenzene	1/16/2003	ND	0.3	ug/l	0.5	0.3		22

663	2-Methyl-4,6-Dinitrophenol	1/9/2002	ND	0.4	ug/l	5	0.4		48
1090	1,2,4-Trichlorobenzene	7/18/2002	ND	0.6	ug/l	5	0.6		101
1091	1,2,4-Trichlorobenzene	1/16/2003	ND	0.6	ug/l	5	0.6		101
1092	1,2,4-Trichlorobenzene	8/14/2003	ND	0.6	ug/l	5	0.6		101
1093	1,2,4-Trichlorobenzene	8/28/2003	ND	0.6	ug/l	5	0.6		101
1094	1,2,4-Trichlorobenzene	1/15/2004	ND	0.6	ug/l	5	0.6		101
1095	1,2,4-Trichlorobenzene	7/16/2004	ND	0.6	ug/l	5	0.6		101
1096	1,2,4-Trichlorobenzene	1/13/2005	ND	1.3	ug/l	5	1.3		101
1097	Aldrin	1/9/2002	ND	0.003	ug/l	0.005	0.003		102
1098	Aldrin	7/18/2002	ND	0.003	ug/l	0.005	0.003		102
1099	Aldrin	1/16/2003	ND	0.003	ug/l	0.005	0.003		102
1100	Aldrin	8/14/2003	ND	0.003	ug/l	0.005	0.003		102
1101	Aldrin	8/28/2003	ND	0.003	ug/l	0.005	0.003		102
1102	Aldrin	1/15/2004	ND	0.003	ug/l	0.005	0.003		102
1103	Aldrin	7/16/2004	ND	0.003	ug/l	0.005	0.003		102
1104	Aldrin	1/13/2005	ND	0.003	ug/l	0.005	0.003		102
1105	A-BHC	1/9/2002	ND	0.002	ug/l	0.01	0.002		103
1106	A-BHC	7/18/2002	ND	0.003	ug/l	0.01	0.003		103
1107	A-BHC	1/16/2003	ND	0.003	ug/l	0.01	0.003		103
1108	A-BHC	8/14/2003	ND	0.003	ug/l	0.01	0.003		103
1109	A-BHC	8/28/2003	ND	0.003	ug/l	0.01	0.003		103
1110	A-BHC	1/15/2004	ND	0.003	ug/l	0.01	0.003		103
1111	A-BHC	7/16/2004	ND	0.003	ug/l	0.01	0.003		103
1112	A-BHC	1/13/2005	ND	0.003	ug/l	0.01	0.003		103
1113	B-BHC	1/9/2002	ND	0.001	ug/l	0.005	0.001		104
1114	B-BHC	1/13/2005	ND	0.003	ug/l	0.005	0.003		104
1115	B-BHC	7/18/2002	ND	0.004	ug/l	0.005	0.004		104
1116	B-BHC	1/16/2003	ND	0.004	ug/l	0.005	0.004		104
1117	B-BHC	8/14/2003	ND	0.004	ug/l	0.005	0.004		104
1118	B-BHC	8/28/2003	ND	0.004	ug/l	0.005	0.004		104
1119	B-BHC	1/15/2004	ND	0.004	ug/l	0.005	0.004		104
1120	B-BHC	7/16/2004	ND	0.004	ug/l	0.005	0.004		104
1121	G-BHC	1/9/2002	ND	0.001	ug/l	0.01	0.001		105
1122	G-BHC	7/18/2002	ND	0.003	ug/l	0.01	0.003		105
1123	G-BHC	1/16/2003	ND	0.003	ug/l	0.01	0.003		105
1124	G-BHC	8/14/2003	ND	0.003	ug/l	0.01	0.003		105
1125	G-BHC	8/28/2003	ND	0.003	ug/l	0.01	0.003		105
1126	G-BHC	1/15/2004	ND	0.003	ug/l	0.01	0.003		105
1127	G-BHC	7/16/2004	ND	0.003	ug/l	0.01	0.003		105
1128	G-BHC	1/13/2005	ND	0.003	ug/l	0.01	0.003		105
1129	Delta-BHC	1/9/2002	ND	0.001	ug/l	0.005	0.001		106
1130	Delta-BHC	7/18/2002	ND	0.002	ug/l	0.005	0.002		106
1131	Delta-BHC	1/16/2003	ND	0.002	ug/l	0.005	0.002		106
1132	Delta-BHC	8/14/2003	ND	0.002	ug/l	0.005	0.002		106
1133	Delta-BHC	8/28/2003	ND	0.002	ug/l	0.005	0.002		106
1134	Delta-BHC	1/15/2004	ND	0.002	ug/l	0.005	0.002		106
1135	Delta-BHC	7/16/2004	ND	0.002	ug/l	0.005	0.002		106
1136	Delta-BHC	1/13/2005	ND	0.003	ug/l	0.005	0.003		106
1137	Chlordane	1/9/2002	ND	0.005	ug/l	0.02	0.005		107
1138	Chlordane	7/18/2002	ND	0.005	ug/l	0.02	0.005		107
1139	Chlordane	1/16/2003	ND	0.005	ug/l	0.02	0.005		107
1140	Chlordane	8/14/2003	ND	0.005	ug/l	0.02	0.005		107
1141	Chlordane	8/28/2003	ND	0.005	ug/l	0.02	0.005		107
1142	Chlordane	1/15/2004	ND	0.005	ug/l	0.02	0.005		107
1143	Chlordane	7/16/2004	ND	0.005	ug/l	0.02	0.005		107
1144	Chlordane	1/13/2005	ND	0.021	ug/l	0.052	0.021		107
1145	4,4'-DDD	1/9/2002	ND	0.001	ug/l	0.01	0.001		108
1146	4,4'-DDD	7/18/2002	ND	0.002	ug/l	0.01	0.002		108
1147	4,4'-DDD	1/16/2003	ND	0.002	ug/l	0.01	0.002		108
1148	4,4'-DDD	8/14/2003	ND	0.002	ug/l	0.01	0.002		108
1149	4,4'-DDD	8/28/2003	ND	0.002	ug/l	0.01	0.002		108
1150	4,4'-DDD	1/15/2004	ND	0.002	ug/l	0.01	0.002		108

Fact Sheet Appendix F-1(1)
C and H Sugar and CSD
Discharge Point 001- Priority Pollutant Effluent Data

1	Antinomy	8/7/2002	ND	0.2	ug/l	5	0.2		1
489	Chlorobenzene	8/28/2003	ND	0.3	ug/l	0.5	0.3		22
490	Chlorobenzene	1/15/2004	ND	0.3	ug/l	0.5	0.3		22
491	Chlorobenzene	7/16/2004	ND	0.3	ug/l	0.5	0.3		22
492	Chlordibromomethane	1/9/2002	ND	0.18	ug/l	0.5	0.18		23
493	Chlordibromomethane	8/6/2002	ND	0.3	ug/l	0.5	0.3		23
494	Chlordibromomethane	1/16/2003	ND	0.3	ug/l	0.5	0.3		23
495	Chlordibromomethane	8/28/2003	ND	0.3	ug/l	0.5	0.3		23
496	Chlordibromomethane	1/15/2004	ND	0.3	ug/l	0.5	0.3		23
497	Chlordibromomethane	7/16/2004	ND	0.3	ug/l	0.5	0.3		23
498	Chlordibromomethane	1/13/2005		1.9	ug/l	0.5	0.07		23
499	Chloroethane	1/13/2005	ND	0.07	ug/l	0.5	0.07		24
500	Chloroethane	1/9/2002	ND	0.34	ug/l	0.5	0.34		24
501	Chloroethane	8/6/2002	ND	0.34	ug/l	0.5	0.34		24
502	Chloroethane	1/16/2003	ND	0.34	ug/l	0.5	0.34		24
503	Chloroethane	8/28/2003	ND	0.34	ug/l	0.5	0.34		24
504	Chloroethane	1/15/2004	ND	0.34	ug/l	0.5	0.34		24
505	Chloroethane	7/16/2004	ND	0.34	ug/l	0.5	0.34		24
506	2-Chloroethylvinyl Ether	1/13/2005	ND	0.1	ug/l	1	0.1		25
507	2-Chloroethylvinyl Ether	1/9/2002	ND	0.31	ug/l	1	0.31		25
508	2-Chloroethylvinyl Ether	8/6/2002	ND	0.32	ug/l	1	0.32		25
509	2-Chloroethylvinyl Ether	1/16/2003	ND	0.32	ug/l	1	0.32		25
510	2-Chloroethylvinyl Ether	8/28/2003	ND	0.32	ug/l	1	0.32		25
511	2-Chloroethylvinyl Ether	1/15/2004	ND	0.32	ug/l	1	0.32		25
512	2-Chloroethylvinyl Ether	7/16/2004	ND	0.32	ug/l	1	0.32		25
513	Chloroform	1/9/2002	ND	0.24	ug/l	0.5	0.24		26
514	Chloroform	8/6/2002	ND	0.31	ug/l	0.5	0.31		26
515	Chloroform	1/16/2003	J	0.4	ug/l	0.5	0.31		26
516	Chloroform	8/28/2003	J	0.4	ug/l	0.5	0.31		26
517	Chloroform	1/15/2004		0.6	ug/l	0.5	0.31		26
518	Chloroform	7/16/2004		0.8	ug/l	0.5	0.31		26
519	Chloroform	1/13/2005		61	ug/l	0.5	0.05		26
520	Dichlorobromomethane	8/6/2002	ND	0.2	ug/l	0.5	0.2		27
521	Dichlorobromomethane	1/16/2003	ND	0.2	ug/l	0.5	0.2		27
522	Dichlorobromomethane	8/28/2003	ND	0.2	ug/l	0.5	0.2		27
523	Dichlorobromomethane	1/15/2004	ND	0.2	ug/l	0.5	0.2		27
524	Dichlorobromomethane	7/16/2004	ND	0.2	ug/l	0.5	0.2		27
525	Dichlorobromomethane	1/9/2002	ND	0.46	ug/l	0.5	0.46		27
526	Dichlorobromomethane	1/13/2005		17	ug/l	0.5	0.06		27
527	1,1-Dichloroethane	1/13/2005	ND	0.05	ug/l	0.5	0.05		28
528	1,1-Dichloroethane	1/9/2002	ND	0.28	ug/l	0.5	0.28		28
529	1,1-Dichloroethane	8/6/2002	ND	0.34	ug/l	0.5	0.34		28
530	1,1-Dichloroethane	1/16/2003	ND	0.34	ug/l	0.5	0.34		28
531	1,1-Dichloroethane	8/28/2003	ND	0.34	ug/l	0.5	0.34		28
532	1,1-Dichloroethane	1/15/2004	ND	0.34	ug/l	0.5	0.34		28
533	1,1-Dichloroethane	7/16/2004	ND	0.34	ug/l	0.5	0.34		28
534	1,2-Dichloroethane	1/13/2005	ND	0.06	ug/l	0.5	0.06		29
535	1,2-Dichloroethane	1/9/2002	ND	0.18	ug/l	0.5	0.18		29
536	1,2-Dichloroethane	8/6/2002	ND	0.2	ug/l	0.5	0.2		29
537	1,2-Dichloroethane	1/16/2003	ND	0.2	ug/l	0.5	0.2		29
538	1,2-Dichloroethane	8/28/2003	ND	0.2	ug/l	0.5	0.2		29
539	1,2-Dichloroethane	1/15/2004	ND	0.2	ug/l	0.5	0.2		29
540	1,2-Dichloroethane	7/16/2004	ND	0.2	ug/l	0.5	0.2		29
541	1,1-Dichloroethylene	1/13/2005	ND	0.06	ug/l	0.5	0.06		30
542	1,1-Dichloroethylene	1/9/2002	ND	0.37	ug/l	0.5	0.37		30
543	1,1-Dichloroethylene	8/6/2002	ND	0.49	ug/l	0.5	0.49		30
544	1,1-Dichloroethylene	1/16/2003	ND	0.49	ug/l	0.5	0.49		30
545	1,1-Dichloroethylene	8/28/2003	ND	0.49	ug/l	0.5	0.49		30
546	1,1-Dichloroethylene	1/15/2004	ND	0.49	ug/l	0.5	0.49		30
547	1,1-Dichloroethylene	7/16/2004	ND	0.49	ug/l	0.5	0.49		30
548	1,2-Dichloropropane	1/13/2005	ND	0.05	ug/l	0.5	0.05		31
549	1,2-Dichloropropane	8/6/2002	ND	0.2	ug/l	0.5	0.2		31

663	2-Methyl-4,6-Dinitrophenol	1/9/2002	ND	0.4	ug/l	5	0.4		48
1151	4,4'-DDD	7/16/2004	ND	0.002	ug/l	0.01	0.002		108
1152	4,4'-DDD	1/13/2005	ND	0.002	ug/l	0.01	0.002		108
1153	4,4'-DDE	1/9/2002	ND	0.001	ug/l	0.01	0.001		109
1154	4,4'-DDE	7/18/2002	ND	0.002	ug/l	0.01	0.002		109
1155	4,4'-DDE	1/16/2003	ND	0.002	ug/l	0.01	0.002		109
1156	4,4'-DDE	8/14/2003	ND	0.002	ug/l	0.01	0.002		109
1157	4,4'-DDE	8/28/2003	ND	0.002	ug/l	0.01	0.002		109
1158	4,4'-DDE	1/15/2004	ND	0.002	ug/l	0.01	0.002		109
1159	4,4'-DDE	7/16/2004	ND	0.002	ug/l	0.01	0.002		109
1160	4,4'-DDE	1/13/2005	ND	0.003	ug/l	0.01	0.003		109
1161	4,4'-DDT	1/9/2002	ND	0.001	ug/l	0.01	0.001		110
1162	4,4'-DDT	7/18/2002	ND	0.003	ug/l	0.01	0.003		110
1163	4,4'-DDT	1/16/2003	ND	0.003	ug/l	0.01	0.003		110
1164	4,4'-DDT	8/14/2003	ND	0.003	ug/l	0.01	0.003		110
1165	4,4'-DDT	8/28/2003	ND	0.003	ug/l	0.01	0.003		110
1166	4,4'-DDT	1/15/2004	ND	0.003	ug/l	0.01	0.003		110
1167	4,4'-DDT	7/16/2004	ND	0.003	ug/l	0.01	0.003		110
1168	4,4'-DDT	1/13/2005	ND	0.003	ug/l	0.01	0.003		110
1169	Dieldrin	1/9/2002	ND	0.002	ug/l	0.01	0.002		111
1170	Dieldrin	7/18/2002	ND	0.002	ug/l	0.01	0.002		111
1171	Dieldrin	1/16/2003	ND	0.002	ug/l	0.01	0.002		111
1172	Dieldrin	8/14/2003	ND	0.002	ug/l	0.01	0.002		111
1173	Dieldrin	8/28/2003	ND	0.002	ug/l	0.01	0.002		111
1174	Dieldrin	1/15/2004	ND	0.002	ug/l	0.01	0.002		111
1175	Dieldrin	7/16/2004	ND	0.002	ug/l	0.01	0.002		111
1176	Dieldrin	1/13/2005	ND	0.002	ug/l	0.01	0.002		111
1177	Endosulfan-A	7/18/2002	ND	0.002	ug/l	0.01	0.002		112
1178	Endosulfan-A	1/16/2003	ND	0.002	ug/l	0.01	0.002		112
1179	Endosulfan-A	8/14/2003	ND	0.002	ug/l	0.01	0.002		112
1180	Endosulfan-A	8/28/2003	ND	0.002	ug/l	0.01	0.002		112
1181	Endosulfan-A	1/15/2004	ND	0.002	ug/l	0.01	0.002		112
1182	Endosulfan-A	7/16/2004	ND	0.002	ug/l	0.01	0.002		112
1183	Endosulfan-A	1/13/2005	ND	0.002	ug/l	0.01	0.002		112
1184	Endosulfan-A	1/9/2002	ND	0.003	ug/l	0.01	0.003		112
1185	Endosulfan-B	1/9/2002	ND	0.001	ug/l	0.01	0.001		113
1186	Endosulfan-B	7/18/2002	ND	0.002	ug/l	0.01	0.002		113
1187	Endosulfan-B	1/16/2003	ND	0.002	ug/l	0.01	0.002		113
1188	Endosulfan-B	8/14/2003	ND	0.002	ug/l	0.01	0.002		113
1189	Endosulfan-B	8/28/2003	ND	0.002	ug/l	0.01	0.002		113
1190	Endosulfan-B	1/15/2004	ND	0.002	ug/l	0.01	0.002		113
1191	Endosulfan-B	7/16/2004	ND	0.002	ug/l	0.01	0.002		113
1192	Endosulfan-B	1/13/2005	ND	0.002	ug/l	0.01	0.002		113
1193	Endosulfan Sulfate	1/9/2002	ND	0.001	ug/l	0.01	0.001		114
1194	Endosulfan Sulfate	7/18/2002	ND	0.002	ug/l	0.01	0.002		114
1195	Endosulfan Sulfate	1/16/2003	ND	0.002	ug/l	0.01	0.002		114
1196	Endosulfan Sulfate	8/14/2003	ND	0.002	ug/l	0.01	0.002		114
1197	Endosulfan Sulfate	8/28/2003	ND	0.002	ug/l	0.01	0.002		114
1198	Endosulfan Sulfate	1/15/2004	ND	0.002	ug/l	0.01	0.002		114
1199	Endosulfan Sulfate	7/16/2004	ND	0.002	ug/l	0.01	0.002		114
1200	Endosulfan Sulfate	1/13/2005	ND	0.003	ug/l	0.01	0.003		114
1201	Endrin	1/9/2002	ND	0.002	ug/l	0.01	0.002		115
1202	Endrin	7/18/2002	ND	0.002	ug/l	0.01	0.002		115
1203	Endrin	1/16/2003	ND	0.002	ug/l	0.01	0.002		115
1204	Endrin	8/14/2003	ND	0.002	ug/l	0.01	0.002		115
1205	Endrin	8/28/2003	ND	0.002	ug/l	0.01	0.002		115
1206	Endrin	1/15/2004	ND	0.002	ug/l	0.01	0.002		115
1207	Endrin	7/16/2004	ND	0.002	ug/l	0.01	0.002		115
1208	Endrin	1/13/2005	ND	0.002	ug/l	0.01	0.002		115
1209	Endrin Aldehyde	1/9/2002	ND	0.002	ug/l	0.01	0.002		116
1210	Endrin Aldehyde	7/18/2002	ND	0.002	ug/l	0.01	0.002		116
1211	Endrin Aldehyde	1/16/2003	ND	0.002	ug/l	0.01	0.002		116

Fact Sheet Appendix F-1(1)
C and H Sugar and CSD
Discharge Point 001- Priority Pollutant Effluent Data

1	Antinomy	8/7/2002	ND	0.2	ug/l	5	0.2		1
550	1,2-Dichloropropane	1/16/2003	ND	0.2	ug/l	0.5	0.2		31
551	1,2-Dichloropropane	8/28/2003	ND	0.2	ug/l	0.5	0.2		31
552	1,2-Dichloropropane	1/15/2004	ND	0.2	ug/l	0.5	0.2		31
553	1,2-Dichloropropane	7/16/2004	ND	0.2	ug/l	0.5	0.2		31
554	1,2-Dichloropropane	1/9/2002	ND	0.22	ug/l	0.5	0.22		31
555	Ethylbenze	1/13/2005	ND	0.06	ug/l	0.5	0.06		33
556	Ethylbenze	1/9/2002	ND	0.3	ug/l	0.5	0.3		33
557	Ethylbenze	8/6/2002	ND	0.4	ug/l	0.5	0.4		33
558	Ethylbenze	1/16/2003	ND	0.4	ug/l	0.5	0.4		33
559	Ethylbenze	8/28/2003	ND	0.4	ug/l	0.5	0.4		33
560	Ethylbenze	1/15/2004	ND	0.4	ug/l	0.5	0.4		33
561	Ethylbenze	7/16/2004	ND	0.4	ug/l	0.5	0.4		33
562	Bromomethane	1/13/2005	ND	0.05	ug/l	0.5	0.05		34
563	Bromomethane	8/6/2002	ND	0.42	ug/l	0.5	0.42		34
564	Bromomethane	1/16/2003	ND	0.42	ug/l	0.5	0.42		34
565	Bromomethane	8/28/2003	ND	0.42	ug/l	0.5	0.42		34
566	Bromomethane	1/15/2004	ND	0.42	ug/l	0.5	0.42		34
567	Bromomethane	7/16/2004	ND	0.42	ug/l	0.5	0.42		34
568	Bromomethane	1/9/2002	ND	0.46	ug/l	0.5	0.46		34
569	Chloromethane	1/13/2005	ND	0.04	ug/l	0.5	0.04		35
570	Chloromethane	1/9/2002	ND	0.36	ug/l	0.5	0.36		35
571	Chloromethane	8/6/2002	ND	0.46	ug/l	0.5	0.46		35
572	Chloromethane	1/16/2003	ND	0.46	ug/l	0.5	0.46		35
573	Chloromethane	8/28/2003	ND	0.46	ug/l	0.5	0.46		35
574	Chloromethane	1/15/2004	ND	0.46	ug/l	0.5	0.46		35
575	Chloromethane	7/16/2004	ND	0.46	ug/l	0.5	0.46		35
576	Methylene Chloride	1/13/2005	ND	0.07	ug/l	0.5	0.07		36
577	Methylene Chloride	1/9/2002	ND	0.38	ug/l	2	0.38		36
578	Methylene Chloride	8/6/2002	ND	0.4	ug/l	2	0.4		36
579	Methylene Chloride	1/16/2003	ND	0.4	ug/l	2	0.4		36
580	Methylene Chloride	8/28/2003	ND	0.4	ug/l	2	0.4		36
581	Methylene Chloride	1/15/2004	ND	0.4	ug/l	0.5	0.4		36
582	Methylene Chloride	7/16/2004	ND	0.4	ug/l	0.5	0.4		36
583	1,1,2,2-Tetrachloroethane	1/13/2005	ND	0.06	ug/l	0.5	0.06		37
584	1,1,2,2-Tetrachloroethane	8/6/2002	ND	0.3	ug/l	0.5	0.3		37
585	1,1,2,2-Tetrachloroethane	1/16/2003	ND	0.3	ug/l	0.5	0.3		37
586	1,1,2,2-Tetrachloroethane	8/28/2003	ND	0.3	ug/l	0.5	0.3		37
587	1,1,2,2-Tetrachloroethane	1/15/2004	ND	0.3	ug/l	0.5	0.3		37
588	1,1,2,2-Tetrachloroethane	7/16/2004	ND	0.3	ug/l	0.5	0.3		37
589	1,1,2,2-Tetrachloroethane	1/9/2002	ND	0.34	ug/l	0.5	0.34		37
590	Tetrachloroethylene	1/13/2005	ND	0.06	ug/l	0.5	0.06		38
591	Tetrachloroethylene	1/9/2002	ND	0.32	ug/l	0.5	0.32		38
592	Tetrachloroethylene	8/6/2002	ND	0.44	ug/l	0.5	0.44		38
593	Tetrachloroethylene	1/16/2003	ND	0.44	ug/l	0.5	0.44		38
594	Tetrachloroethylene	8/28/2003	ND	0.44	ug/l	0.5	0.44		38
595	Tetrachloroethylene	1/15/2004	ND	0.44	ug/l	0.5	0.44		38
596	Tetrachloroethylene	7/16/2004	ND	0.44	ug/l	0.5	0.44		38
597	Toluene	1/13/2005	ND	0.06	ug/l	0.5	0.06		39
598	Toluene	1/9/2002	ND	0.25	ug/l	0.5	0.25		39
599	Toluene	8/28/2003	ND	0.32	ug/l	0.5	0.32		39
600	Toluene	1/15/2004	ND	0.32	ug/l	0.5	0.32		39
601	Toluene	7/16/2004	ND	0.32	ug/l	0.5	0.32		39
602	Toluene	8/6/2002	J	0.4	ug/l	0.5	0.32		39
603	Toluene	1/16/2003	J	0.45	ug/l	0.5	0.32		39
604	1,2-Trans-Dichloroethylene	1/13/2005	ND	0.05	ug/l	0.5	0.05		40
605	1,2-Trans-Dichloroethylene	1/9/2002	ND	0.3	ug/l	0.5	0.3		40
606	1,2-Trans-Dichloroethylene	8/6/2002	ND	0.43	ug/l	0.5	0.43		40
607	1,2-Trans-Dichloroethylene	1/16/2003	ND	0.43	ug/l	0.5	0.43		40
608	1,2-Trans-Dichloroethylene	8/28/2003	ND	0.43	ug/l	0.5	0.43		40
609	1,2-Trans-Dichloroethylene	1/15/2004	ND	0.43	ug/l	0.5	0.43		40
610	1,2-Trans-Dichloroethylene	7/16/2004	ND	0.43	ug/l	0.5	0.43		40

663	2-Methyl-4,6-Dinitrophenol	1/9/2002	ND	0.4	ug/l	5	0.4		48
1212	Endrin Aldehyde	8/14/2003	ND	0.002	ug/l	0.01	0.002		116
1213	Endrin Aldehyde	8/28/2003	ND	0.002	ug/l	0.01	0.002		116
1214	Endrin Aldehyde	1/15/2004	ND	0.002	ug/l	0.01	0.002		116
1215	Endrin Aldehyde	7/16/2004	ND	0.002	ug/l	0.01	0.002		116
1216	Endrin Aldehyde	1/13/2005	ND	0.003	ug/l	0.01	0.003		116
1217	Heptachlor	1/9/2002	ND	0.003	ug/l	0.01	0.003		117
1218	Heptachlor	7/18/2002	ND	0.003	ug/l	0.01	0.003		117
1219	Heptachlor	1/16/2003	ND	0.003	ug/l	0.01	0.003		117
1220	Heptachlor	8/14/2003	ND	0.003	ug/l	0.01	0.003		117
1221	Heptachlor	8/28/2003	ND	0.003	ug/l	0.01	0.003		117
1222	Heptachlor	1/15/2004	ND	0.003	ug/l	0.01	0.003		117
1223	Heptachlor	7/16/2004	ND	0.003	ug/l	0.01	0.003		117
1224	Heptachlor	1/13/2005	ND	0.003	ug/l	0.01	0.003		117
1225	Heptchlor Epoxide	1/9/2002	ND	0.002	ug/l	0.01	0.002		118
1226	Heptchlor Epoxide	1/13/2005	ND	0.002	ug/l	0.01	0.002		118
1227	Heptchlor Epoxide	7/18/2002	ND	0.003	ug/l	0.01	0.003		118
1228	Heptchlor Epoxide	1/16/2003	ND	0.003	ug/l	0.01	0.003		118
1229	Heptchlor Epoxide	8/14/2003	ND	0.003	ug/l	0.01	0.003		118
1230	Heptchlor Epoxide	8/28/2003	ND	0.003	ug/l	0.01	0.003		118
1231	Heptchlor Epoxide	1/15/2004	ND	0.003	ug/l	0.01	0.003		118
1232	Heptchlor Epoxide	7/16/2004	ND	0.003	ug/l	0.01	0.003		118
1233	PCB-1016	1/13/2005	ND	0.031	ug/l	0.1	0.031		119
1234	PCB-1016	7/18/2002	ND	0.05	ug/l	0.1	0.05		119
1235	PCB-1016	1/16/2003	ND	0.05	ug/l	0.1	0.05		119
1236	PCB-1016	8/14/2003	ND	0.05	ug/l	0.1	0.05		119
1237	PCB-1016	8/28/2003	ND	0.05	ug/l	0.1	0.05		119
1238	PCB-1016	1/15/2004	ND	0.05	ug/l	0.1	0.05		119
1239	PCB-1016	7/16/2004	ND	0.05	ug/l	0.1	0.05		119
1240	PCB-1016	1/9/2002	ND	0.08	ug/l	0.1	0.08		119
1241	PCB-1221	1/9/2002	ND	0.03	ug/l	0.1	0.03		120
1242	PCB-1221	7/18/2002	ND	0.03	ug/l	0.1	0.03		120
1243	PCB-1221	1/16/2003	ND	0.03	ug/l	0.1	0.03		120
1244	PCB-1221	8/14/2003	ND	0.03	ug/l	0.1	0.03		120
1245	PCB-1221	8/28/2003	ND	0.03	ug/l	0.1	0.03		120
1246	PCB-1221	1/15/2004	ND	0.03	ug/l	0.1	0.03		120
1247	PCB-1221	7/16/2004	ND	0.03	ug/l	0.1	0.03		120
1248	PCB-1221	1/13/2005	ND	0.052	ug/l	0.1	0.052		120
1249	PCB-1232	1/9/2002	ND	0.04	ug/l	0.1	0.04		121
1250	PCB-1232	7/18/2002	ND	0.04	ug/l	0.1	0.04		121
1251	PCB-1232	1/16/2003	ND	0.04	ug/l	0.1	0.04		121
1252	PCB-1232	8/14/2003	ND	0.04	ug/l	0.1	0.04		121
1253	PCB-1232	8/28/2003	ND	0.04	ug/l	0.1	0.04		121
1254	PCB-1232	1/15/2004	ND	0.04	ug/l	0.1	0.04		121
1255	PCB-1232	7/16/2004	ND	0.04	ug/l	0.1	0.04		121
1256	PCB-1232	1/13/2005	ND	0.062	ug/l	0.1	0.062		121
1257	PCB-1242	1/13/2005	ND	0.041	ug/l	0.1	0.041		122
1258	PCB-1242	7/18/2002	ND	0.05	ug/l	0.1	0.05		122
1259	PCB-1242	1/16/2003	ND	0.05	ug/l	0.1	0.05		122
1260	PCB-1242	8/14/2003	ND	0.05	ug/l	0.1	0.05		122
1261	PCB-1242	8/28/2003	ND	0.05	ug/l	0.1	0.05		122
1262	PCB-1242	1/15/2004	ND	0.05	ug/l	0.1	0.05		122
1263	PCB-1242	7/16/2004	ND	0.05	ug/l	0.1	0.05		122
1264	PCB-1242	1/9/2002	ND	0.08	ug/l	0.1	0.08		122
1265	PCB-1248	1/9/2002	ND	0.05	ug/l	0.1	0.05		123
1266	PCB-1248	7/18/2002	ND	0.05	ug/l	0.1	0.05		123
1267	PCB-1248	1/16/2003	ND	0.05	ug/l	0.1	0.05		123
1268	PCB-1248	8/14/2003	ND	0.05	ug/l	0.1	0.05		123
1269	PCB-1248	8/28/2003	ND	0.05	ug/l	0.1	0.05		123
1270	PCB-1248	1/15/2004	ND	0.05	ug/l	0.1	0.05		123
1271	PCB-1248	7/16/2004	ND	0.05	ug/l	0.1	0.05		123
1272	PCB-1248	1/13/2005	ND	0.052	ug/l	0.1	0.052		123

Fact Sheet Appendix F-1(1)
C and H Sugar and CSD
Discharge Point 001- Priority Pollutant Effluent Data

1	Antinomy	8/7/2002	ND	0.2	ug/l	5	0.2		1
611	1,1,1-Trichloroethane	1/13/2005	ND	0.06	ug/l	0.5	0.06		41
612	1,1,1-Trichloroethane	1/9/2002	ND	0.35	ug/l	0.5	0.35		41
613	1,1,1-Trichloroethane	8/6/2002	ND	0.49	ug/l	0.5	0.49		41
614	1,1,1-Trichloroethane	1/16/2003	ND	0.49	ug/l	0.5	0.49		41
615	1,1,1-Trichloroethane	8/28/2003	ND	0.49	ug/l	0.5	0.49		41
616	1,1,1-Trichloroethane	1/15/2004	ND	0.49	ug/l	0.5	0.49		41
617	1,1,1-Trichloroethane	7/16/2004	ND	0.49	ug/l	0.5	0.49		41
618	1,1,2-Trichloroethane	1/13/2005	ND	0.07	ug/l	0.5	0.07		42
619	1,1,2-Trichloroethane	1/9/2002	ND	0.27	ug/l	0.5	0.27		42
620	1,1,2-Trichloroethane	8/6/2002	ND	0.3	ug/l	0.5	0.3		42
621	1,1,2-Trichloroethane	1/16/2003	ND	0.3	ug/l	0.5	0.3		42
622	1,1,2-Trichloroethane	8/28/2003	ND	0.3	ug/l	0.5	0.3		42
623	1,1,2-Trichloroethane	1/15/2004	ND	0.3	ug/l	0.5	0.3		42
624	1,1,2-Trichloroethane	7/16/2004	ND	0.3	ug/l	0.5	0.3		42
625	Trichloroethylene	1/13/2005	ND	0.06	ug/l	0.5	0.06		43
626	Trichloroethylene	1/9/2002	ND	0.29	ug/l	0.5	0.29		43
627	Trichloroethylene	8/6/2002	ND	0.3	ug/l	0.5	0.3		43
628	Trichloroethylene	1/16/2003	ND	0.3	ug/l	0.5	0.3		43
629	Trichloroethylene	8/28/2003	ND	0.3	ug/l	0.5	0.3		43
630	Trichloroethylene	1/15/2004	ND	0.3	ug/l	0.5	0.3		43
631	Trichloroethylene	7/16/2004	ND	0.3	ug/l	0.5	0.3		43
632	Vinyl Chloride	1/13/2005	ND	0.05	ug/l	0.5	0.05		44
633	Vinyl Chloride	1/9/2002	ND	0.34	ug/l	0.5	0.34		44
634	Vinyl Chloride	8/6/2002	ND	0.47	ug/l	0.5	0.47		44
635	Vinyl Chloride	1/16/2003	ND	0.47	ug/l	0.5	0.47		44
636	Vinyl Chloride	8/28/2003	ND	0.47	ug/l	0.5	0.47		44
637	Vinyl Chloride	1/15/2004	ND	0.47	ug/l	0.5	0.47		44
638	Vinyl Chloride	7/16/2004	ND	0.47	ug/l	0.5	0.47		44
639	Chlorophenol	1/9/2002	ND	0.4	ug/l	5	0.4		45
640	Chlorophenol	7/18/2002	ND	0.6	ug/l	5	0.6		45
641	Chlorophenol	1/16/2003	ND	0.6	ug/l	5	0.6		45
642	Chlorophenol	8/14/2003	ND	0.6	ug/l	5	0.6		45
643	Chlorophenol	8/28/2003	ND	0.6	ug/l	5	0.6		45
644	Chlorophenol	1/15/2004	ND	0.6	ug/l	2	0.6		45
645	Chlorophenol	7/16/2004	ND	0.6	ug/l	2	0.6		45
646	Chlorophenol	1/13/2005	ND	1.2	ug/l	2	1.2		45
647	2,4-Dichlorophenol	1/9/2002	ND	0.3	ug/l	5	0.3		46
648	2,4-Dichlorophenol	7/18/2002	ND	0.7	ug/l	5	0.7		46
649	2,4-Dichlorophenol	1/16/2003	ND	0.7	ug/l	5	0.7		46
650	2,4-Dichlorophenol	8/14/2003	ND	0.7	ug/l	5	0.7		46
651	2,4-Dichlorophenol	8/28/2003	ND	0.7	ug/l	5	0.7		46
652	2,4-Dichlorophenol	1/15/2004	ND	0.7	ug/l	1	0.7		46
653	2,4-Dichlorophenol	7/16/2004	ND	0.7	ug/l	1	0.7		46
654	2,4-Dichlorophenol	1/13/2005	ND	0.9	ug/l	1	0.9		46
655	2,4-Dimethylphenol	1/9/2002	ND	0.3	ug/l	2	0.3		47
656	2,4-Dimethylphenol	7/18/2002	ND	0.9	ug/l	2	0.9		47
657	2,4-Dimethylphenol	1/16/2003	ND	0.9	ug/l	2	0.9		47
658	2,4-Dimethylphenol	8/14/2003	ND	0.9	ug/l	2	0.9		47
659	2,4-Dimethylphenol	8/28/2003	ND	0.9	ug/l	2	0.9		47
660	2,4-Dimethylphenol	1/15/2004	ND	0.9	ug/l	2	0.9		47
661	2,4-Dimethylphenol	7/16/2004	ND	0.9	ug/l	2	0.9		47
662	2,4-Dimethylphenol	1/13/2005	ND	1.1	ug/l	2	1.1		47

663	2-Methyl-4,6-Dinitrophenol	1/9/2002	ND	0.4	ug/l	5	0.4		48
1273	PCB-1254	1/13/2005	ND	0.062	ug/l	0.1	0.062		124
1274	PCB-1254	1/9/2002	ND	0.07	ug/l	0.1	0.07		124
1275	PCB-1254	7/18/2002	ND	0.07	ug/l	0.1	0.07		124
1276	PCB-1254	1/16/2003	ND	0.07	ug/l	0.1	0.07		124
1277	PCB-1254	8/14/2003	ND	0.07	ug/l	0.1	0.07		124
1278	PCB-1254	8/28/2003	ND	0.07	ug/l	0.1	0.07		124
1279	PCB-1254	1/15/2004	ND	0.07	ug/l	0.1	0.07		124
1280	PCB-1254	7/16/2004	ND	0.07	ug/l	0.1	0.07		124
1281	PCB-1260	1/9/2002	ND	0.05	ug/l	0.1	0.05		125
1282	PCB-1260	7/18/2002	ND	0.05	ug/l	0.1	0.05		125
1283	PCB-1260	1/16/2003	ND	0.05	ug/l	0.1	0.05		125
1284	PCB-1260	8/14/2003	ND	0.05	ug/l	0.1	0.05		125
1285	PCB-1260	8/28/2003	ND	0.05	ug/l	0.1	0.05		125
1286	PCB-1260	1/15/2004	ND	0.05	ug/l	0.1	0.05		125
1287	PCB-1260	7/16/2004	ND	0.05	ug/l	0.1	0.05		125
1288	PCB-1260	1/13/2005	ND	0.062	ug/l	0.1	0.062		125
1289	Toxaphene	1/13/2005	ND	0.15	ug/l	0.5	0.15		126
1290	Toxaphene	1/9/2002	ND	0.2	ug/l	0.5	0.2		126
1291	Toxaphene	7/18/2002	ND	0.4	ug/l	0.5	0.4		126
1292	Toxaphene	1/16/2003	ND	0.4	ug/l	0.5	0.4		126
1293	Toxaphene	8/14/2003	ND	0.4	ug/l	0.5	0.4		126
1294	Toxaphene	8/28/2003	ND	0.4	ug/l	0.5	0.4		126
1295	Toxaphene	1/15/2004	ND	0.4	ug/l	0.5	0.4		126
1296	Toxaphene	7/16/2004	ND	0.4	ug/l	0.5	0.4	2	126
1297	cis-1,3-DiClpe	1/13/2005	ND	0.06	ug/l	0.5	0.06		32-cis
1298	cis-1,3-DiClpe	8/6/2002	ND	0.2	ug/l	0.5	0.2		32-cis
1299	cis-1,3-DiClpe	1/16/2003	ND	0.2	ug/l	0.5	0.2		32-cis
1300	cis-1,3-DiClpe	8/28/2003	ND	0.2	ug/l	0.5	0.2		32-cis
1301	cis-1,3-DiClpe	1/15/2004	ND	0.2	ug/l	0.5	0.2		32-cis
1302	cis-1,3-DiClpe	7/16/2004	ND	0.2	ug/l	0.5	0.2		32-cis
1303	cis-1,3-DiClpe	1/9/2002	ND	0.25	ug/l	0.5	0.25		32-cis
1304	trans-1,3DiClpe	1/13/2005	ND	0.06	ug/l	0.5	0.06		32-tran
1305	trans-1,3DiClpe	1/9/2002	ND	0.22	ug/l	0.5	0.22		32-tran
1306	trans-1,3DiClpe	8/6/2002	ND	0.3	ug/l	0.5	0.3		32-tran
1307	trans-1,3DiClpe	1/16/2003	ND	0.3	ug/l	0.5	0.3		32-tran
1308	trans-1,3DiClpe	8/28/2003	ND	0.3	ug/l	0.5	0.3		32-tran
1309	trans-1,3DiClpe	1/15/2004	ND	0.3	ug/l	0.5	0.3		32-tran
1310	trans-1,3DiClpe	7/16/2004	ND	0.3	ug/l	0.5	0.3		32-tran
1311	Chlorpyrifos	1/13/2005	ND	0.03	ug/l	0.05	0.03		B
1312	Diazinon	1/13/2005	ND	0.04	ug/l	0.05	0.04		C
1313	Tributyltin	07/15/2004	ND	4E-04	µg/L		0.001		
1314	Tributyltin	1/15/2004	ND	4E-04	µg/L		0.001		
1315	Tributyltin	8/28/2003	ND	0.004	µg/L		0.001		
1316	Tributyltin	7/18/2002	ND	0.004	µg/L		0.002		

Appendix F-1(2)
Effluent Data for Priority Pollutants for Discharge Point 002

Fact Sheet Appendix F-1(2)
C and H Sugar and CSD
Discharge Point 002- Priority Pollutant Effluent Data

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
1	Antinomy	11/7/2002	ND	0.01	ug/l	0.5	0.01		1
2	Antinomy	4/8/2004	ND	0.01	ug/l	0.5	0.01		1
3	Antinomy	4/10/2003	ND	0.2	ug/l	0.5	0.2		1
4	Antinomy	7/31/2003	ND	0.2	ug/l	0.5	0.2		1
5	Antinomy	9/11/2003	ND	0.2	ug/l	0.5	0.2		1
6	Antinomy	11/7/2003	ND	0.2	ug/l	0.5	0.2		1
7	Antinomy	1/15/2004	ND	0.2	ug/l	0.5	0.2		1
8	Antinomy	2/12/2004	ND	0.2	ug/l	0.5	0.2		1
9	Antinomy	6/3/2004	ND	0.2	ug/l	0.5	0.2		1
10	Antinomy	3/11/2004	J	0.2	ug/l	0.5	0.2		1
11	Antinomy	2/14/2002	J	0.3	ug/l	0.5	0.01		1
12	Antinomy	4/11/2002	J	0.3	ug/l	0.5	0.01		1
13	Antinomy	12/5/2002	J	0.3	ug/l	0.5	0.01		1
14	Antinomy	2/13/2003	J	0.3	ug/l	0.5	0.2		1
15	Antinomy	5/9/2003	J	0.3	ug/l	0.5	0.2		1
16	Antinomy	6/5/2003	J	0.3	ug/l	0.5	0.2		1
17	Antinomy	7/17/2003	J	0.3	ug/l	0.5	0.2		1
18	Antinomy	10/9/2003	J	0.3	ug/l	0.5	0.2		1
19	Antinomy	7/1/2004	J	0.3	ug/l	0.5	0.2		1
20	Antinomy	5/9/2002	J	0.32	ug/l	0.5	0.01		1
21	Antinomy	8/28/2003	J	0.37	ug/l	0.5	0.2		1
22	Antinomy	3/15/2002	J	0.4	ug/l	0.5	0.01		1
23	Antinomy	6/6/2002	J	0.4	ug/l	1	0.2		1
24	Antinomy	7/4/2002	J	0.4	ug/l	0.5	0.2		1
25	Antinomy	10/10/2002	J	0.4	ug/l	1	0.2		1
26	Antinomy	9/12/2002	J	0.7	ug/l	1	0.01		1
27	Antinomy	1/2/2004		0.5	ug/l	0.5	0.2		1
28	Antinomy	8/1/2002		0.6	ug/l	0.5	0.2		1
29	Antinomy	1/2/2003		0.6	ug/l	0.5	0.2		1
30	Arsenic	11/7/2002	ND	0.14	ug/l	0.5	0.14		2
31	Arsenic	7/31/2003	ND	0.14	ug/l	0.5	0.14		2
32	Arsenic	12/4/2003	ND	0.14	ug/l	0.5	0.14		2
33	Arsenic	1/15/2004	ND	0.14	ug/l	0.5	0.14		2
34	Arsenic	2/12/2004	ND	0.14	ug/l	0.5	0.14		2
35	Arsenic	3/11/2004	ND	0.14	ug/l	0.5	0.14		2
36	Arsenic	4/8/2004	ND	0.14	ug/l	0.5	0.14		2
37	Arsenic	6/3/2004	ND	0.14	ug/l	0.5	0.14		2
38	Arsenic	3/15/2002	J	0.2	ug/l	0.5	0.08		2
39	Arsenic	4/10/2003	J	0.2	ug/l	0.5	0.14		2
40	Arsenic	5/9/2002	J	0.37	ug/l	0.5	0.08		2
41	Arsenic	2/14/2002	J	0.5	ug/l	0.5	0.08		2
42	Arsenic	7/17/2003		0.5	ug/l	0.5	0.14		2
43	Arsenic	4/11/2002		0.6	ug/l	0.5	0.08		2
44	Arsenic	6/6/2002		0.6	ug/l	0.5	0.2		2
45	Arsenic	12/5/2002		0.6	ug/l	0.5	0.14		2
46	Arsenic	6/5/2003		0.6	ug/l	0.5	0.14		2
47	Arsenic	2/13/2003		0.7	ug/l	0.5	0.2		2
48	Arsenic	7/4/2002		0.8	ug/l	0.5	0.2		2
49	Arsenic	9/11/2003		0.8	ug/l	0.5	0.14		2
50	Arsenic	10/9/2003		0.8	ug/l	0.5	0.14		2
51	Arsenic	11/7/2003		0.8	ug/l	0.5	0.14		2
52	Arsenic	8/1/2002		0.9	ug/l	0.5	0.2		2
53	Arsenic	5/9/2003		0.9	ug/l	0.5	0.14		2
54	Arsenic	9/12/2002		1	ug/l	1	0.14		2
55	Arsenic	10/10/2002		1	ug/l	1	0.14		2

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
630	DiClBromthan	7/18/2002		9	ug/l	1	0.2		27
631	DiClBromthan	6/6/2002		18	ug/l	1	0.2		27
632	DiClBromthan	1/2/2003		18	ug/l	0.5	0.2		27
633	DiClBromthan	7/17/2003		20	ug/l	0.5	0.2		27
634	DiClBromthan	1/15/2004		26	ug/l	0.5	0.2		27
635	DiClBromthan	1/3/2002		28	ug/l	0.5	0.46		27
636	1,1-DCA	1/3/2002	ND	0.28	ug/l	0.5	0.28		28
637	1,1-DCA	6/6/2002	ND	0.34	ug/l	1	0.34		28
638	1,1-DCA	7/18/2002	ND	0.34	ug/l	1	0.34		28
639	1,1-DCA	1/2/2003	ND	0.34	ug/l	0.5	0.34		28
640	1,1-DCA	7/17/2003	ND	0.34	ug/l	0.5	0.34		28
641	1,1-DCA	1/15/2004	ND	0.34	ug/l	0.5	0.34		28
642	12E	1/3/2002	ND	0.18	ug/l	0.5	0.18		29
643	12E	6/6/2002	ND	0.2	ug/l	1	0.2		29
644	12E	7/18/2002	ND	0.2	ug/l	1	0.2		29
645	12E	1/2/2003	ND	0.2	ug/l	0.5	0.2		29
646	12E	7/17/2003	ND	0.2	ug/l	0.5	0.2		29
647	12E	1/15/2004	ND	0.2	ug/l	0.5	0.2		29
648	11E	1/3/2002	ND	0.37	ug/l	0.5	0.37		30
649	11E	6/6/2002	ND	0.49	ug/l	1	0.49		30
650	11E	7/18/2002	ND	0.49	ug/l	1	0.49		30
651	11E	1/2/2003	ND	0.49	ug/l	0.5	0.49		30
652	11E	7/17/2003	ND	0.49	ug/l	0.5	0.49		30
653	11E	1/15/2004	ND	0.49	ug/l	0.5	0.49		30
654	1,2 Dchlopro	6/6/2002	ND	0.2	ug/l	1	0.2		31
655	1,2 Dchlopro	7/18/2002	ND	0.2	ug/l	1	0.2		31
656	1,2 Dchlopro	1/2/2003	ND	0.2	ug/l	0.5	0.2		31
657	1,2 Dchlopro	7/17/2003	ND	0.2	ug/l	0.5	0.2		31
658	1,2 Dchlopro	1/15/2004	ND	0.2	ug/l	0.5	0.2		31
659	1,2 Dchlopro	1/3/2002	ND	0.22	ug/l	0.5	0.22		31
660	Ethylbenze	1/3/2002	ND	0.3	ug/l	0.5	0.3		33
661	Ethylbenze	6/6/2002	ND	0.4	ug/l	1	0.4		33
662	Ethylbenze	7/18/2002	ND	0.4	ug/l	1	0.4		33
663	Ethylbenze	1/2/2003	ND	0.4	ug/l	0.5	0.4		33
664	Ethylbenze	7/17/2003	ND	0.4	ug/l	0.5	0.4		33
665	Ethylbenze	1/15/2004	ND	0.4	ug/l	0.5	0.4		33
666	Bromomethane	6/6/2002	ND	0.42	ug/l	1	0.42		34
667	Bromomethane	7/18/2002	ND	0.42	ug/l	1	0.42		34
668	Bromomethane	1/2/2003	ND	0.42	ug/l	0.5	0.42		34
669	Bromomethane	7/17/2003	ND	0.42	ug/l	0.5	0.42		34
670	Bromomethane	1/15/2004	ND	0.42	ug/l	0.5	0.42		34
671	Bromomethane	1/3/2002	ND	0.46	ug/l	0.5	0.46		34
672	Chloromethan	7/18/2002	ND	0.46	ug/l	1	0.46		35
673	Chloromethan	1/2/2003	ND	0.46	ug/l	0.5	0.46		35
674	Chloromethan	7/17/2003	ND	0.46	ug/l	0.5	0.46		35
675	Chloromethan	1/15/2004	ND	0.46	ug/l	0.5	0.46		35
676	Chloromethan	6/6/2002	J	0.5	ug/l	1	0.46		35
677	Chloromethan	1/3/2002		1	ug/l	0.5	0.36		35
678	Meth_Ch	1/3/2002	ND	0.38	ug/l	2	0.38		36
679	Meth_Ch	6/6/2002	ND	0.4	ug/l	3	0.4		36
680	Meth_Ch	7/18/2002	ND	0.4	ug/l	3	0.4		36
681	Meth_Ch	1/2/2003	ND	0.4	ug/l	2	0.4		36
682	Meth_Ch	7/17/2003	ND	0.4	ug/l	2	0.4		36
683	Meth_Ch	1/15/2004	ND	0.4	ug/l	0.5	0.4		36
684	1,1,2,2-TCA	6/6/2002	ND	0.3	ug/l	1	0.3		37

Fact Sheet Appendix F-1(2)
C and H Sugar and CSD
Discharge Point 002- Priority Pollutant Effluent Data

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
56	Arsenic	7/1/2004		1	ug/l	0.5	0.14		2
57	Arsenic	8/28/2003		1.3	ug/l	0.5	0.14		2
58	Arsenic	1/2/2004		1.5	ug/l	0.5	0.14		2
59	Arsenic	1/2/2003		1.7	ug/l	0.5	0.14		2
60	Beryllium	2/14/2002	ND	0.06	ug/l	0.1	0.06		3
61	Beryllium	3/15/2002	ND	0.06	ug/l	0.2	0.06		3
62	Beryllium	4/11/2002	ND	0.06	ug/l	0.1	0.06		3
63	Beryllium	5/9/2002	ND	0.06	ug/l	0.1	0.06		3
64	Beryllium	6/6/2002	ND	0.06	ug/l	0.2	0.06		3
65	Beryllium	7/4/2002	ND	0.06	ug/l	0.1	0.06		3
66	Beryllium	8/1/2002	ND	0.06	ug/l	0.1	0.06		3
67	Beryllium	9/12/2002	ND	0.06	ug/l	0.1	0.06		3
68	Beryllium	10/10/2002	ND	0.06	ug/l	0.1	0.06		3
69	Beryllium	11/7/2002	ND	0.06	ug/l	0.1	0.06		3
70	Beryllium	12/5/2002	ND	0.06	ug/l	0.1	0.06		3
71	Beryllium	1/2/2003	ND	0.06	ug/l	0.1	0.06		3
72	Beryllium	2/13/2003	ND	0.06	ug/l	0.1	0.06		3
73	Beryllium	4/10/2003	ND	0.06	ug/l	0.2	0.06		3
74	Beryllium	5/9/2003	ND	0.06	ug/l	0.1	0.06		3
75	Beryllium	6/5/2003	ND	0.06	ug/l	0.1	0.06		3
76	Beryllium	7/17/2003	ND	0.06	ug/l	0.1	0.06		3
77	Beryllium	7/31/2003	ND	0.06	ug/l	0.1	0.06		3
78	Beryllium	8/28/2003	ND	0.06	ug/l	0.1	0.06		3
79	Beryllium	9/11/2003	ND	0.06	ug/l	0.1	0.06		3
80	Beryllium	10/9/2003	ND	0.06	ug/l	0.1	0.06		3
81	Beryllium	11/7/2003	ND	0.06	ug/l	0.1	0.06		3
82	Beryllium	12/4/2003	ND	0.06	ug/l	0.1	0.06		3
83	Beryllium	1/2/2004	ND	0.06	ug/l	0.1	0.06		3
84	Beryllium	1/15/2004	ND	0.06	ug/l	0.1	0.06		3
85	Beryllium	2/12/2004	ND	0.06	ug/l	0.1	0.06		3
86	Beryllium	3/11/2004	ND	0.06	ug/l	0.1	0.06		3
87	Beryllium	4/8/2004	ND	0.06	ug/l	0.1	0.06		3
88	Beryllium	6/3/2004	ND	0.06	ug/l	0.1	0.06		3
89	Beryllium	7/1/2004	ND	0.06	ug/l	0.1	0.06		3
90	Cadmium	2/14/2002	ND	0.04	ug/l	0.1	0.04		4
91	Cadmium	9/12/2002	ND	0.04	ug/l	0.2	0.04		4
92	Cadmium	11/7/2002	ND	0.04	ug/l	0.1	0.04		4
93	Cadmium	1/2/2003	ND	0.04	ug/l	0.1	0.04		4
94	Cadmium	4/10/2003	ND	0.04	ug/l	0.1	0.04		4
95	Cadmium	5/9/2003	ND	0.04	ug/l	0.1	0.04		4
96	Cadmium	6/5/2003	ND	0.04	ug/l	0.1	0.04		4
97	Cadmium	12/4/2003	ND	0.04	ug/l	0.1	0.04		4
98	Cadmium	1/2/2004	ND	0.04	ug/l	0.1	0.04		4
99	Cadmium	1/15/2004	ND	0.04	ug/l	0.1	0.04		4
100	Cadmium	2/12/2004	ND	0.04	ug/l	0.1	0.04		4
101	Cadmium	3/11/2004	ND	0.04	ug/l	0.1	0.04		4
102	Cadmium	4/8/2004	ND	0.04	ug/l	0.1	0.04		4
103	Cadmium	2/13/2003	J	0.03	ug/l	0.1	0.03		4
104	Cadmium	3/15/2002	J	0.04	ug/l	0.1	0.04		4
105	Cadmium	12/5/2002	J	0.04	ug/l	0.1	0.04		4
106	Cadmium	10/9/2003	J	0.04	ug/l	0.1	0.04		4
107	Cadmium	6/3/2004	J	0.04	ug/l	0.1	0.04		4
108	Cadmium	5/9/2002	J	0.05	ug/l	0.1	0.04		4
109	Cadmium	9/11/2003	J	0.06	ug/l	0.1	0.04		4
110	Cadmium	6/6/2002	J	0.07	ug/l	0.2	0.03		4

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
685	1,1,2,2-TCA	7/18/2002	ND	0.3	ug/l	1	0.3		37
686	1,1,2,2-TCA	1/2/2003	ND	0.3	ug/l	0.5	0.3		37
687	1,1,2,2-TCA	7/17/2003	ND	0.3	ug/l	0.5	0.3		37
688	1,1,2,2-TCA	1/15/2004	ND	0.3	ug/l	0.5	0.3		37
689	1,1,2,2-TCA	1/3/2002	ND	0.34	ug/l	0.5	0.34		37
690	Tetrachlor	1/3/2002	ND	0.32	ug/l	0.5	0.32		38
691	Tetrachlor	6/6/2002	ND	0.44	ug/l	1	0.44		38
692	Tetrachlor	7/18/2002	ND	0.44	ug/l	1	0.44		38
693	Tetrachlor	1/2/2003	ND	0.44	ug/l	0.5	0.44		38
694	Tetrachlor	7/17/2003	ND	0.44	ug/l	0.5	0.44		38
695	Tetrachlor	1/15/2004	ND	0.44	ug/l	0.5	0.44		38
696	Toluene	1/3/2002	ND	0.25	ug/l	0.5	0.25		39
697	Toluene	6/6/2002	ND	0.32	ug/l	1	0.32		39
698	Toluene	7/18/2002	ND	0.32	ug/l	1	0.32		39
699	Toluene	1/2/2003	ND	0.32	ug/l	0.5	0.32		39
700	Toluene	7/17/2003	ND	0.32	ug/l	0.5	0.32		39
701	Toluene	1/15/2004	ND	0.32	ug/l	0.5	0.32		39
702	T-1,2-DCE	1/3/2002	ND	0.3	ug/l	0.5	0.3		40
703	T-1,2-DCE	6/6/2002	ND	0.43	ug/l	1	0.43		40
704	T-1,2-DCE	7/18/2002	ND	0.43	ug/l	1	0.43		40
705	T-1,2-DCE	1/2/2003	ND	0.43	ug/l	0.5	0.43		40
706	T-1,2-DCE	7/17/2003	ND	0.43	ug/l	0.5	0.43		40
707	T-1,2-DCE	1/15/2004	ND	0.43	ug/l	0.5	0.43		40
708	1,1,1-TCA	1/3/2002	ND	0.35	ug/l	0.5	0.35		41
709	1,1,1-TCA	6/6/2002	ND	0.49	ug/l	1	0.49		41
710	1,1,1-TCA	7/18/2002	ND	0.49	ug/l	1	0.49		41
711	1,1,1-TCA	1/2/2003	ND	0.49	ug/l	0.5	0.49		41
712	1,1,1-TCA	7/17/2003	ND	0.49	ug/l	0.5	0.49		41
713	1,1,1-TCA	1/15/2004	ND	0.49	ug/l	0.5	0.49		41
714	1,1,2-TCA	1/3/2002	ND	0.27	ug/l	0.5	0.27		42
715	1,1,2-TCA	6/6/2002	ND	0.3	ug/l	1	0.3		42
716	1,1,2-TCA	7/18/2002	ND	0.3	ug/l	1	0.3		42
717	1,1,2-TCA	1/2/2003	ND	0.3	ug/l	0.5	0.3		42
718	1,1,2-TCA	7/17/2003	ND	0.3	ug/l	0.5	0.3		42
719	1,1,2-TCA	1/15/2004	ND	0.3	ug/l	0.5	0.3		42
720	TriClethene	1/3/2002	ND	0.29	ug/l	0.5	0.29		43
721	TriClethene	6/6/2002	ND	0.3	ug/l	1	0.3		43
722	TriClethene	7/18/2002	ND	0.3	ug/l	1	0.3		43
723	TriClethene	1/2/2003	ND	0.3	ug/l	0.5	0.3		43
724	TriClethene	7/17/2003	ND	0.3	ug/l	0.5	0.3		43
725	TriClethene	1/15/2004	ND	0.3	ug/l	0.5	0.3		43
726	Vinyl chlo	1/3/2002	ND	0.34	ug/l	0.5	0.34		44
727	Vinyl chlo	6/6/2002	ND	0.47	ug/l	1	0.47		44
728	Vinyl chlo	7/18/2002	ND	0.47	ug/l	1	0.47		44
729	Vinyl chlo	1/2/2003	ND	0.47	ug/l	0.5	0.47		44
730	Vinyl chlo	7/17/2003	ND	0.47	ug/l	0.5	0.47		44
731	Vinyl chlo	1/15/2004	ND	0.47	ug/l	0.5	0.47		44
732	2-Chlorophen	1/3/2002	ND	0.4	ug/l	5	0.4		45
733	2-Chlorophen	6/6/2002	ND	0.6	ug/l	5	0.6		45
734	2-Chlorophen	7/18/2002	ND	0.6	ug/l	5	0.6		45
735	2-Chlorophen	1/2/2003	ND	0.6	ug/l	5	0.6		45
736	2-Chlorophen	7/17/2003	ND	0.6	ug/l	5	0.6		45
737	2-Chlorophen	1/15/2004	ND	0.6	ug/l	2	0.6		45
738	2,4-Dcphenol	1/3/2002	ND	0.3	ug/l	5	0.3		46
739	2,4-Dcphenol	6/6/2002	ND	0.7	ug/l	5	0.7		46

Fact Sheet Appendix F-1(2)
C and H Sugar and CSD
Discharge Point 002- Priority Pollutant Effluent Data

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
111	Cadmium	10/10/2002	J	0.07	ug/l	0.2	0.04		4
112	Cadmium	7/31/2003	J	0.07	ug/l	0.1	0.04		4
113	Cadmium	11/7/2003	J	0.07	ug/l	0.1	0.04		4
114	Cadmium	8/1/2002	J	0.08	ug/l	0.1	0.03		4
115	Cadmium	4/11/2002	J	0.09	ug/l	0.1	0.04		4
116	Cadmium	7/17/2003	J	0.09	ug/l	0.1	0.04		4
117	Cadmium	8/28/2003	J	0.096	ug/l	0.1	0.04		4
118	Cadmium	7/4/2002	J	0.1	ug/l	0.1	0.03		4
119	Cadmium	7/1/2004		0.2	ug/l	0.1	0.04		4
120	Chromium	03/15/2002	ND	0.2	ug/L	1	0.2		5
121	Chromium	07/04/2002	ND	0.2	ug/L	0.5	0.2		5
122	Chromium	08/01/2002	ND	0.2	ug/L	0.5	0.2		5
123	Chromium	09/12/2002	ND	0.2	ug/L	0.5	0.2		5
124	Chromium	10/10/2002	ND	0.2	ug/L	0.5	0.2		5
125	Chromium	07/31/2003	ND	0.2	ug/L	0.5	0.2		5
126	Chromium	08/28/2003	ND	0.2	ug/L	0.5	0.2		5
127	Chromium	10/09/2003	ND	0.2	ug/L	0.5	0.2		5
128	Chromium	11/07/2003	ND	0.2	ug/L	0.5	0.2		5
129	Chromium	12/04/2003	ND	0.2	ug/L	0.5	0.2		5
130	Chromium	01/02/2004	ND	0.2	ug/L	0.5	0.2		5
131	Chromium	01/15/2004	ND	0.2	ug/L	0.5	0.2		5
132	Chromium	02/12/2004	ND	0.2	ug/L	0.5	0.2		5
133	Chromium	04/08/2004	ND	0.2	ug/L	0.5	0.2		5
134	Chromium	07/01/2004	ND	0.2	ug/L	0.5	0.2		5
135	Chromium	04/11/2002	J	0.3	ug/L	0.5	0.2		5
136	Chromium	06/06/2002	J	0.3	ug/L	1	0.2		5
137	Chromium	07/17/2003	J	0.3	ug/L	0.5	0.2		5
138	Chromium	06/03/2004	J	0.3	ug/L	0.5	0.2		5
139	Chromium	05/09/2002	J	0.44	ug/L	0.5	0.2		5
140	Chromium	12/05/2002	J	0.47	ug/L	0.5	0.2		5
141	Chromium	02/14/2002	J	0.5	ug/L	0.5	0.2		5
142	Chromium	11/07/2002		0.6	ug/L	0.5	0.2		5
143	Chromium	02/13/2003		0.6	ug/L	0.5	0.2		5
144	Chromium	04/10/2003		0.6	ug/L	0.5	0.2		5
145	Chromium	09/11/2003		0.7	ug/L	0.5	0.2		5
146	Chromium	03/11/2004		0.7	ug/L	0.5	0.2		5
147	Chromium	01/02/2003		0.8	ug/L	0.5	0.2		5
148	Chromium	06/05/2003		1	ug/L	0.5	0.2		5
149	Chromium	05/09/2003		9.8	ug/L	0.5	0.2		5
150	Chromium (VI)	07/18/2002	ND	0.9	ug/L	10	0.9		5
151	Chromium (VI)	01/02/2003	ND	0.9	ug/L	10	0.9		5
152	Chromium (VI)	01/15/2004	ND	0.9	ug/L	10	0.9		5
153	Copper	8/11/2005		2.3	ug/l				6
154	Copper	12/4/2003		2.4	ug/l	0.5	0.2		6
155	Copper	4/8/2004		2.6	ug/l	0.5	0.2		6
156	Copper	6/3/2004		2.7	ug/l	0.5	0.2		6
157	Copper	5/5/2005		2.7	ug/l				6
158	Copper	7/14/2005		2.8	ug/l				6
159	Copper	9/8/2005		2.8	ug/l				6
160	Copper	9/12/2002		3	ug/l	1	0.2		6

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
740	2,4-Dcphenol	7/18/2002	ND	0.7	ug/l	5	0.7		46
741	2,4-Dcphenol	1/2/2003	ND	0.7	ug/l	5	0.7		46
742	2,4-Dcphenol	7/17/2003	ND	0.7	ug/l	5	0.7		46
743	2,4-Dcphenol	1/15/2004	ND	0.7	ug/l	1	0.7		46
744	2,4-Dmphenol	1/3/2002	ND	0.3	ug/l	2	0.3		47
745	2,4-Dmphenol	6/6/2002	ND	0.9	ug/l	2	0.9		47
746	2,4-Dmphenol	7/18/2002	ND	0.9	ug/l	2	0.9		47
747	2,4-Dmphenol	1/2/2003	ND	0.9	ug/l	2	0.9		47
748	2,4-Dmphenol	7/17/2003	ND	0.9	ug/l	2	0.9		47
749	2,4-Dmphenol	1/15/2004	ND	0.9	ug/l	2	0.9		47
750	4,6,-Dinit	1/3/2002	ND	0.4	ug/l	5	0.4		48
751	4,6,-Dinit	6/6/2002	ND	0.9	ug/l	5	0.9		48
752	4,6,-Dinit	7/18/2002	ND	0.9	ug/l	5	0.9		48
753	4,6,-Dinit	1/2/2003	ND	0.9	ug/l	5	0.9		48
754	4,6,-Dinit	7/17/2003	ND	0.9	ug/l	5	0.9		48
755	4,6,-Dinit	1/15/2004	ND	0.9	ug/l	5	0.9		48
756	2,4,- Dini	1/3/2002	ND	0.3	ug/l	5	0.3		49
757	2,4,- Dini	6/6/2002	ND	0.6	ug/l	5	0.6		49
758	2,4,- Dini	7/18/2002	ND	0.6	ug/l	5	0.6		49
759	2,4,- Dini	1/2/2003	ND	0.6	ug/l	5	0.6		49
760	2,4,- Dini	7/17/2003	ND	0.6	ug/l	5	0.6		49
761	2,4,- Dini	1/15/2004	ND	0.6	ug/l	5	0.6		49
762	2-Nitrophen	1/3/2002	ND	0.3	ug/l	5	0.3		50
763	2-Nitrophen	6/6/2002	ND	0.7	ug/l	5	0.7		50
764	2-Nitrophen	7/18/2002	ND	0.7	ug/l	5	0.7		50
765	2-Nitrophen	1/2/2003	ND	0.7	ug/l	5	0.7		50
766	2-Nitrophen	7/17/2003	ND	0.7	ug/l	5	0.7		50
767	2-Nitrophen	1/15/2004	ND	0.7	ug/l	5	0.7		50
768	4-Nitropheno	1/3/2002	ND	0.2	ug/l	5	0.2		51
769	4-Nitropheno	6/6/2002	ND	0.6	ug/l	5	0.6		51
770	4-Nitropheno	7/18/2002	ND	0.6	ug/l	5	0.6		51
771	4-Nitropheno	1/2/2003	ND	0.6	ug/l	5	0.6		51
772	4-Nitropheno	7/17/2003	ND	0.6	ug/l	5	0.6		51
773	4-Nitropheno	1/15/2004	ND	0.6	ug/l	5	0.6		51
774	4-cl-3mphen	1/3/2002	ND	0.3	ug/l	1	0.3		52
775	4-cl-3mphen	6/6/2002	ND	0.5	ug/l	1	0.5		52
776	4-cl-3mphen	7/18/2002	ND	0.5	ug/l	1	0.5		52
777	4-cl-3mphen	1/2/2003	ND	0.5	ug/l	1	0.5		52
778	4-cl-3mphen	7/17/2003	ND	0.5	ug/l	1	0.5		52
779	4-cl-3mphen	1/15/2004	ND	0.5	ug/l	1	0.5		52
780	PCP	1/3/2002	ND	0.4	ug/l	1	0.4		53
781	PCP	6/6/2002	ND	0.9	ug/l	1	0.9		53
782	PCP	7/18/2002	ND	0.9	ug/l	1	0.9		53
783	PCP	1/2/2003	ND	0.9	ug/l	1	0.9		53
784	PCP	7/17/2003	ND	0.9	ug/l	1	0.9		53
785	PCP	1/15/2004	ND	0.9	ug/l	1	0.9		53
786	Phenol	01/03/2002	ND	0.2	ug/L	1	0.2		54
787	Phenol	06/06/2002	ND	0.4	ug/L	1	0.4		54
788	Phenol	07/18/2002	ND	0.4	ug/L	1	0.4		54
789	Phenol	01/02/2003	ND	0.4	ug/L	1	0.4		54

Fact Sheet Appendix F-1(2)
C and H Sugar and CSD
Discharge Point 002- Priority Pollutant Effluent Data

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
161	Copper	11/7/2002		3	ug/l	0.5	0.2		6
162	Copper	2/14/2002		3.1	ug/l	0.5	0.2		6
163	Copper	11/4/2004		3.1	ug/l				6
164	Copper	12/2/2004		3.1	ug/l				6
165	Copper	3/10/2005		3.2	ug/l				6
166	Copper	10/6/2005		3.2	ug/l				6
167	Copper	4/7/2005		3.3	ug/l				6
168	Copper	2/12/2004		3.4	ug/l	0.5	0.2		6
169	Copper	12/1/2005		3.4	ug/l				6
170	Copper	12/5/2002		3.5	ug/l	0.5	0.2		6
171	Copper	3/15/2002		3.6	ug/l	0.5	0.2		6
172	Copper	2/10/2005		3.6	ug/l				6
173	Copper	1/15/2004		3.7	ug/l	0.5	0.2		6
174	Copper	3/11/2004		3.7	ug/l	0.5	0.2		6
175	Copper	8/12/2004		3.7	ug/l				6
176	Copper	11/3/2005		3.8	ug/l				6
177	Copper	9/11/2003		3.9	ug/l	0.5	0.2		6
178	Copper	10/10/2002		4	ug/l	1	0.2		6
179	Copper	1/2/2003		4	ug/l	0.5	0.2		6
180	Copper	9/9/2004		4	ug/l				6
181	Copper	2/13/2003		4.1	ug/l	0.5	0.3		6
182	Copper	7/31/2003		4.1	ug/l	0.5	0.2		6
183	Copper	1/13/2005		4.1	ug/l				6
184	Copper	11/7/2003		4.2	ug/l	0.5	0.2		6
185	Copper	4/10/2003		4.3	ug/l	0.5	0.2		6
186	Copper	7/17/2003		4.3	ug/l	0.5	0.2		6
187	Copper	6/2/2005		4.3	ug/l				6
188	Copper	10/9/2003		4.4	ug/l	0.5	0.2		6
189	Copper	1/2/2004		4.8	ug/l	0.5	0.2		6
190	Copper	7/1/2004		4.8	ug/l	0.5	0.2		6
191	Copper	4/11/2002		5	ug/l	0.5	0.2		6
192	Copper	5/9/2002		5.3	ug/l	0.5	0.2		6
193	Copper	8/28/2003		5.5	ug/l	0.5	0.2		6
194	Copper	10/7/2004		5.6	ug/l				6
195	Copper	7/4/2002		5.8	ug/l	0.5	0.3		6
196	Copper	6/5/2003		5.9	ug/l	0.5	0.2		6
197	Copper	6/6/2002		6	ug/l	0.5	0.3		6
198	Copper	8/1/2002		6.1	ug/l	0.5	0.3		6
199	Copper	5/9/2003		13	ug/l	0.5	0.2		6
200	Lead	4/10/2003	ND	0.02	ug/l	0.25	0.02		7
201	Lead	7/31/2003	ND	0.02	ug/l	0.25	0.02		7
202	Lead	8/28/2003	ND	0.02	ug/l	0.25	0.02		7
203	Lead	12/4/2003	ND	0.02	ug/l	0.25	0.02		7
204	Lead	7/1/2004	ND	0.02	ug/l	0.25	0.02		7
205	Lead	2/10/2005	J	0.04	ug/l				7
206	Lead	8/11/2005	J	0.11	ug/l				7
207	Lead	7/14/2005	J	0.12	ug/l				7
208	Lead	6/3/2004	J	0.13	ug/l	0.25	0.02		7
209	Lead	3/15/2002	J	0.15	ug/l	0.25	0.02		7
210	Lead	12/5/2002	J	0.15	ug/l	0.25	0.02		7
211	Lead	7/4/2002	J	0.16	ug/l	0.25	0.04		7
212	Lead	2/14/2002	J	0.18	ug/l	0.25	0.02		7
213	Lead	4/11/2002	J	0.18	ug/l	0.25	0.02		7
214	Lead	5/9/2002	J	0.18	ug/l	0.25	0.02		7
215	Lead	7/17/2003	J	0.2	ug/l	0.25	0.02		7

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
790	Phenol	07/17/2003	ND	0.4	ug/L	1	0.4		54
791	Phenol	01/15/2004	ND	0.4	ug/L	1	0.4		54
792	Phenols	07/17/2003	ND	1.6	ug/L	5	1.6		54
793	Phenols	01/02/2003	ND	3	ug/L	5	3		54
794	Phenols	01/15/2004	J	2.1	ug/L	5	1.6		54
795	Phenol	1/12/2005	J	4	ug/l				54
796	Phenols	11/07/2002	J	4	ug/L	5	3		54
797	Phenol	7/14/2005	<	2	ug/l				54
798	Phenols	06/06/2002		6	ug/L	5	3		54
799	2,4,6-Tric	1/3/2002	ND	0.2	ug/l	5	0.2		55
800	2,4,6-Tric	6/6/2002	ND	0.6	ug/l	5	0.6		55
801	2,4,6-Tric	7/18/2002	ND	0.6	ug/l	5	0.6		55
802	2,4,6-Tric	1/2/2003	ND	0.6	ug/l	5	0.6		55
803	2,4,6-Tric	7/17/2003	ND	0.6	ug/l	5	0.6		55
804	2,4,6-Tric	1/15/2004	ND	0.6	ug/l	5	0.6		55
805	Acnaphthene	1/3/2002	ND	0.17	ug/l	0.3	0.17		56
806	Acnaphthene	6/6/2002	ND	0.17	ug/l	0.3	0.17		56
807	Acnaphthene	11/7/2002	ND	0.17	ug/l	0.3	0.17		56
808	Acnaphthene	1/2/2003	ND	0.17	ug/l	0.3	0.17		56
809	Acnaphthene	7/17/2003	ND	0.17	ug/l	0.3	0.17		56
810	Acnaphthene	1/15/2004	ND	0.17	ug/l	0.3	0.17		56
811	Acenaphth	1/3/2002	ND	0.03	ug/l	0.2	0.03		57
812	Acenaphth	6/6/2002	ND	0.03	ug/l	0.2	0.03		57
813	Acenaphth	11/7/2002	ND	0.03	ug/l	0.2	0.03		57
814	Acenaphth	1/2/2003	ND	0.03	ug/l	0.2	0.03		57
815	Acenaphth	7/17/2003	ND	0.03	ug/l	0.2	0.03		57
816	Acenaphth	1/15/2004	ND	0.03	ug/l	0.2	0.03		57
817	Anthracene	1/3/2002	ND	0.16	ug/l	0.3	0.16		58
818	Anthracene	6/6/2002	ND	0.16	ug/l	0.3	0.16		58
819	Anthracene	11/7/2002	ND	0.16	ug/l	0.3	0.16		58
820	Anthracene	1/2/2003	ND	0.16	ug/l	0.3	0.16		58
821	Anthracene	7/17/2003	ND	0.16	ug/l	0.3	0.16		58
822	Anthracene	1/15/2004	ND	0.16	ug/l	0.3	0.16		58
823	Benzidine	1/3/2002	ND	0.3	ug/l	5	0.3		59
824	Benzidine	6/6/2002	ND	1	ug/l	5	1		59
825	Benzidine	7/18/2002	ND	1	ug/l	5	1		59
826	Benzidine	1/2/2003	ND	1	ug/l	5	1		59
827	Benzidine	7/17/2003	ND	1	ug/l	5	1		59
828	Benzidine	1/15/2004	ND	1	ug/l	5	1		59
829	1,2-BZ(AH)AN	1/3/2002	ND	0.12	ug/l	0.3	0.12		60
830	1,2-BZ(AH)AN	6/6/2002	ND	0.12	ug/l	0.3	0.12		60
831	1,2-BZ(AH)AN	11/7/2002	ND	0.12	ug/l	0.3	0.12		60
832	1,2-BZ(AH)AN	1/2/2003	ND	0.12	ug/l	0.3	0.12		60
833	1,2-BZ(AH)AN	7/17/2003	ND	0.12	ug/l	0.3	0.12		60
834	1,2-BZ(AH)AN	1/15/2004	ND	0.12	ug/l	0.3	0.12		60
835	BENZO(A)Pyre	1/3/2002	ND	0.09	ug/l	0.3	0.09		61
836	BENZO(A)Pyre	6/6/2002	ND	0.09	ug/l	0.3	0.09		61
837	BENZO(A)Pyre	11/7/2002	ND	0.09	ug/l	0.3	0.09		61
838	BENZO(A)Pyre	1/2/2003	ND	0.09	ug/l	0.3	0.09		61
839	BENZO(A)Pyre	7/17/2003	ND	0.09	ug/l	0.3	0.09		61
840	BENZO(A)Pyre	1/15/2004	ND	0.09	ug/l	0.3	0.09		61
841	3,4-BFLUOR	1/3/2002	ND	0.11	ug/l	0.3	0.11		62
842	3,4-BFLUOR	6/6/2002	ND	0.11	ug/l	0.3	0.11		62
843	3,4-BFLUOR	11/7/2002	ND	0.11	ug/l	0.3	0.11		62
844	3,4-BFLUOR	1/2/2003	ND	0.11	ug/l	0.3	0.11		62

Fact Sheet Appendix F-1(2)
C and H Sugar and CSD
Discharge Point 002- Priority Pollutant Effluent Data

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
216	Lead	9/9/2004	J	0.2	ug/l				7
217	Lead	2/13/2003	J	0.24	ug/l	0.25	0.04		7
218	Lead	6/6/2002	J	0.34	ug/l	0.5	0.04		7
219	Lead	9/12/2002	J	0.39	ug/l	0.5	0.02		7
220	Lead	11/4/2004	<	0	ug/l				7
221	Lead	12/2/2004	<	0	ug/l				7
222	Lead	8/12/2004	<	0.13	ug/l				7
223	Lead	9/11/2003		0.02	ug/l	0.25	0.02		7
224	Lead	9/8/2005		0.21	ug/l				7
225	Lead	3/10/2005		0.26	ug/l				7
226	Lead	6/2/2005		0.3	ug/l				7
227	Lead	10/6/2005		0.31	ug/l				7
228	Lead	2/12/2004		0.33	ug/l	0.25	0.02		7
229	Lead	4/8/2004		0.33	ug/l	0.25	0.02		7
230	Lead	4/7/2005		0.4	ug/l				7
231	Lead	5/5/2005		0.4	ug/l				7
232	Lead	11/3/2005		0.4	ug/l				7
233	Lead	1/2/2003		0.41	ug/l	0.25	0.02		7
234	Lead	3/11/2004		0.42	ug/l	0.25	0.02		7
235	Lead	10/10/2002		0.44	ug/l	0.25	0.02		7
236	Lead	1/2/2004		0.44	ug/l	0.25	0.02		7
237	Lead	6/5/2003		0.46	ug/l	0.25	0.02		7
238	Lead	12/1/2005		0.49	ug/l				7
239	Lead	10/7/2004		0.5	ug/l				7
240	Lead	1/15/2004		0.54	ug/l	0.25	0.02		7
241	Lead	8/1/2002		0.59	ug/l	0.25	0.04		7
242	Lead	11/7/2003		0.86	ug/l	0.25	0.02		7
243	Lead	1/13/2005		0.88	ug/l				7
244	Lead	11/7/2002		1.4	ug/l	0.25	0.02		7
245	Lead	10/9/2003		1.6	ug/l	0.25	0.02		7
246	Lead	5/9/2003		2.8	ug/l	0.25	0.02		7
247	Mercury	7/4/2002	ND	0.008	ug/l	0.2	0.008		8
248	Mercury	8/1/2002	ND	0.008	ug/l	0.05	0.008		8
249	Mercury	9/12/2002	ND	0.008	ug/l	0.2	0.008		8
250	Mercury	10/10/2002	ND	0.008	ug/l	0.2	0.008		8
251	Mercury	11/7/2002	ND	0.008	ug/l	0.2	0.008		8
252	Mercury	1/2/2003	ND	0.008	ug/l	0.2	0.008		8
253	Mercury	2/13/2003	ND	0.008	ug/l	0.05	0.008		8
254	Mercury	4/10/2003	ND	0.008	ug/l	0.2	0.008		8
255	Mercury	6/5/2003	ND	0.008	ug/l	0.2	0.008		8
256	Mercury	7/17/2003	ND	0.008	ug/l	0.2	0.008		8
257	Mercury	7/31/2003	ND	0.008	ug/l	0.2	0.008		8
258	Mercury	8/28/2003	ND	0.008	ug/l	0.2	0.008		8
259	Mercury	9/11/2003	ND	0.008	ug/l	0.2	0.008		8
260	Mercury	10/9/2003	ND	0.008	ug/l	0.2	0.008		8
261	Mercury	12/4/2003	ND	0.008	ug/l	0.2	0.008		8
262	Mercury	1/2/2004	ND	0.008	ug/l	0.2	0.008		8
263	Mercury	1/15/2004	ND	0.008	ug/l	0.2	0.008		8
264	Mercury	2/12/2004	ND	0.008	ug/l	0.2	0.008		8
265	Mercury	3/11/2004	ND	0.008	ug/l	0.2	0.008		8
266	Mercury	4/8/2004	ND	0.008	ug/l	0.2	0.008		8
267	Mercury	11/7/2003	J	0.009	ug/l	0.05	0.008		8
268	Mercury	5/9/2002	J	0.02	ug/l	0.2	0.008		8
269	Mercury	12/5/2002	J	0.03	ug/l	0.2	0.008		8
270	Mercury	3/4/2003		0.0009	ug/l	0.0005	0.00024		8

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
845	3,4-BFLUOR	7/17/2003	ND	0.11	ug/l	0.3	0.11		62
846	3,4-BFLUOR	1/15/2004	ND	0.11	ug/l	0.3	0.11		62
847	1,12-BZPERY	1/3/2002	ND	0.06	ug/l	0.1	0.06		63
848	1,12-BZPERY	6/6/2002	ND	0.06	ug/l	0.1	0.06		63
849	1,12-BZPERY	11/7/2002	ND	0.06	ug/l	0.1	0.06		63
850	1,12-BZPERY	1/2/2003	ND	0.06	ug/l	0.1	0.06		63
851	1,12-BZPERY	7/17/2003	ND	0.06	ug/l	0.1	0.06		63
852	1,12-BZPERY	1/15/2004	ND	0.06	ug/l	0.1	0.06		63
853	B(K)Flranthn	1/3/2002	ND	0.16	ug/l	0.3	0.16		64
854	B(K)Flranthn	6/6/2002	ND	0.16	ug/l	0.3	0.16		64
855	B(K)Flranthn	11/7/2002	ND	0.16	ug/l	0.3	0.16		64
856	B(K)Flranthn	1/2/2003	ND	0.16	ug/l	0.3	0.16		64
857	B(K)Flranthn	7/17/2003	ND	0.16	ug/l	0.3	0.16		64
858	B(K)Flranthn	1/15/2004	ND	0.16	ug/l	0.3	0.16		64
859	BEM	1/3/2002	ND	0.3	ug/l	5	0.3		65
860	BEM	6/6/2002	ND	0.9	ug/l	5	0.9		65
861	BEM	7/18/2002	ND	0.9	ug/l	5	0.9		65
862	BEM	1/2/2003	ND	0.9	ug/l	5	0.9		65
863	BEM	7/17/2003	ND	0.9	ug/l	5	0.9		65
864	BEM	1/15/2004	ND	0.9	ug/l	5	0.9		65
865	Bis(2-chlo	1/3/2002	ND	0.3	ug/l	1	0.3		66
866	Bis(2-chlo	6/6/2002	ND	0.7	ug/l	1	0.7		66
867	Bis(2-chlo	7/18/2002	ND	0.7	ug/l	1	0.7		66
868	Bis(2-chlo	1/2/2003	ND	0.7	ug/l	1	0.7		66
869	Bis(2-chlo	7/17/2003	ND	0.7	ug/l	1	0.7		66
870	Bis(2-chlo	1/15/2004	ND	0.7	ug/l	1	0.7		66
871	BIT	6/6/2002	ND	0.6	ug/l	2	0.6		67
872	BIT	7/18/2002	ND	0.6	ug/l	2	0.6		67
873	BIT	1/2/2003	ND	0.6	ug/l	2	0.6		67
874	BIT	7/17/2003	ND	0.6	ug/l	2	0.6		67
875	BIT	1/15/2004	ND	0.6	ug/l	2	0.6		67
876	BIT	1/3/2002	ND	1	ug/l	2	1		67
877	Bis(2-ethy	1/3/2002	ND	0.3	ug/l	5	0.3		68
878	Bis(2-ethy	6/6/2002	ND	0.8	ug/l	5	0.8		68
879	Bis(2-ethy	1/2/2003	ND	0.8	ug/l	5	0.8		68
880	Bis(2-ethy	7/18/2002	E	160	ug/l	5	0.8		68
881	Bis(2-ethy	7/17/2003		14	ug/l	5	0.8		68
882	Bis(2-ethy	1/15/2004		17	ug/l	5	0.8		68
883	4-BP-Phnethr	6/6/2002	ND	0.4	ug/l	5	0.4		69
884	4-BP-Phnethr	7/18/2002	ND	0.4	ug/l	5	0.4		69
885	4-BP-Phnethr	1/2/2003	ND	0.4	ug/l	5	0.4		69
886	4-BP-Phnethr	7/17/2003	ND	0.4	ug/l	5	0.4		69
887	4-BP-Phnethr	1/15/2004	ND	0.4	ug/l	5	0.4		69
888	4-BP-Phnethr	1/3/2002	ND	0.5	ug/l	5	0.5		69
889	Btlbenphthl	1/3/2002	ND	0.4	ug/l	5	0.4		70
890	Btlbenphthl	6/6/2002	ND	0.8	ug/l	5	0.8		70
891	Btlbenphthl	7/18/2002	ND	0.8	ug/l	5	0.8		70
892	Btlbenphthl	1/2/2003	ND	0.8	ug/l	5	0.8		70
893	Btlbenphthl	7/17/2003	ND	0.8	ug/l	5	0.8		70
894	Btlbenphthl	1/15/2004	ND	0.8	ug/l	5	0.8		70
895	2-Chlornapth	1/3/2002	ND	0.3	ug/l	5	0.3		71
896	2-Chlornapth	6/6/2002	ND	0.5	ug/l	5	0.5		71
897	2-Chlornapth	7/18/2002	ND	0.5	ug/l	5	0.5		71
898	2-Chlornapth	1/2/2003	ND	0.5	ug/l	5	0.5		71
899	2-Chlornapth	7/17/2003	ND	0.5	ug/l	5	0.5		71

Fact Sheet Appendix F-1(2)
C and H Sugar and CSD
Discharge Point 002- Priority Pollutant Effluent Data

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
271	Mercury	12/20/2005		0.002	ug/l				8
272	Mercury	1/4/2005		0.0021	ug/l				8
273	Mercury	1/18/2005		0.0025	ug/l				8
274	Mercury	5/11/2004		0.0029	ug/l	0.0005	0.00024		8
275	Mercury	8/16/2005		0.0034	ug/l				8
276	Mercury	5/14/2002		0.0036	ug/l	0.0005	0.00017		8
277	Mercury	8/31/2004		0.0037	ug/l				8
278	Mercury	6/7/2005		0.004	ug/l				8
279	Mercury	3/3/2004		0.0042	ug/l	0.0005	0.00024		8
280	Mercury	2/17/2004		0.0043	ug/l	0.0005	0.00024		8
281	Mercury	12/6/2005		0.0046	ug/l				8
282	Mercury	6/11/2002		0.0047	ug/l	0.0005	0.00024		8
283	Mercury	10/25/2005		0.0048	ug/l				8
284	Mercury	9/17/2002		0.0049	ug/l	0.0005	0.00017		8
285	Mercury	1/20/2004		0.0056	ug/l	0.0005	0.00024		8
286	Mercury	2/5/2002		0.006	ug/l	0.0005	0.00017		8
287	Mercury	6/21/2005		0.006	ug/l				8
288	Mercury	7/19/2005		0.0066	ug/l				8
289	Mercury	12/21/2004		0.0077	ug/l				8
290	Mercury	2/3/2004		0.0078	ug/l	0.0005	0.00024		8
291	Mercury	6/25/2002		0.0083	ug/l	0.0005	0.00024		8
292	Mercury	1/6/2004		0.0083	ug/l	0.0005	0.00024		8
293	Mercury	4/15/2003		0.0089	ug/l	0.0005	0.00024		8
294	Mercury	2/1/2005		0.0089	ug/l				8
295	Mercury	2/4/2003		0.0093	ug/l	0.0005	0.00024		8
296	Mercury	7/5/2005		0.0093	ug/l				8
297	Mercury	7/9/2002		0.0098	ug/l	0.0005	0.00024		8
298	Mercury	3/29/2005		0.01	ug/l				8
299	Mercury	2/15/2005		0.011	ug/l				8
300	Mercury	8/2/2005		0.011	ug/l				8
301	Mercury	10/11/2005		0.011	ug/l				8
302	Mercury	7/23/2002		0.012	ug/l	0.0005	0.00024		8
303	Mercury	10/12/2004		0.012	ug/l				8
304	Mercury	3/15/2005		0.012	ug/l				8
305	Mercury	5/24/2005		0.012	ug/l				8
306	Mercury	4/13/2004		0.013	ug/l	0.0005	0.00024		8
307	Mercury	4/12/2005		0.013	ug/l				8
308	Mercury	11/12/2002		0.014	ug/l	0.0005	0.00024		8
309	Mercury	12/24/2002		0.014	ug/l	0.0005	0.00024		8
310	Mercury	5/10/2005		0.014	ug/l				8
311	Mercury	9/13/2005		0.014	ug/l				8
312	Mercury	12/10/2002		0.015	ug/l	0.0005	0.00024		8
313	Mercury	1/21/2003		0.015	ug/l	0.0005	0.00024		8
314	Mercury	3/1/2005		0.015	ug/l				8
315	Mercury	4/1/2003		0.016	ug/l	0.0005	0.00024		8
316	Mercury	11/22/2004		0.017	ug/l				8
317	Mercury	11/26/2002		0.019	ug/l	0.0005	0.00024		8
318	Mercury	8/3/2004		0.02	ug/l				8
319	Mercury	8/17/2004		0.021	ug/l				8
320	Mercury	9/3/2002		0.024	ug/l	0.0005	0.00024		8
321	Mercury	10/15/2002		0.024	ug/l	0.0005	0.00024		8
322	Mercury	7/6/2004		0.024	ug/l	0.0005	0.00024		8
323	Mercury	3/5/2002		0.026	ug/l	0.0005	0.00017		8
324	Mercury	11/8/2005		0.028	ug/l				8
325	Mercury	1/8/2002		0.033	ug/l	0.0005	0.00017		8

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
900	2-Chlornapth	1/15/2004	ND	0.5	ug/l	5	0.5		71
901	4-Cppether	1/3/2002	ND	0.4	ug/l	5	0.4		72
902	4-Cppether	6/6/2002	ND	0.5	ug/l	5	0.5		72
903	4-Cppether	7/18/2002	ND	0.5	ug/l	5	0.5		72
904	4-Cppether	1/2/2003	ND	0.5	ug/l	5	0.5		72
905	4-Cppether	7/17/2003	ND	0.5	ug/l	5	0.5		72
906	4-Cppether	1/15/2004	ND	0.5	ug/l	5	0.5		72
907	CHRYSENE	1/3/2002	ND	0.14	ug/l	0.3	0.14		73
908	CHRYSENE	6/6/2002	ND	0.14	ug/l	0.3	0.14		73
909	CHRYSENE	11/7/2002	ND	0.14	ug/l	0.3	0.14		73
910	CHRYSENE	1/2/2003	ND	0.14	ug/l	0.3	0.14		73
911	CHRYSENE	7/17/2003	ND	0.14	ug/l	0.3	0.14		73
912	CHRYSENE	1/15/2004	ND	0.14	ug/l	0.3	0.14		73
913	DBZ(AH)ANTHR	1/3/2002	ND	0.04	ug/l	0.1	0.04		74
914	DBZ(AH)ANTHR	6/6/2002	ND	0.04	ug/l	0.1	0.04		74
915	DBZ(AH)ANTHR	11/7/2002	ND	0.04	ug/l	0.1	0.04		74
916	DBZ(AH)ANTHR	1/2/2003	ND	0.04	ug/l	0.1	0.04		74
917	DBZ(AH)ANTHR	7/17/2003	ND	0.04	ug/l	0.1	0.04		74
918	DBZ(AH)ANTHR	1/15/2004	ND	0.04	ug/l	0.1	0.04		74
919	1,2 Dichl-B	1/3/2002	ND	0.12	ug/l	0.5	0.12		75
920	1,2 Dichl-B	7/18/2002	ND	0.2	ug/l	1	0.2		75
921	1,2 Dichl-B	1/15/2004	ND	0.2	ug/l	0.5	0.2		75
922	1,2 Dichl-B	6/6/2002	ND	0.6	ug/l	2	0.6		75
923	1,2 Dichl-B	1/2/2003	ND	0.6	ug/l	2	0.6		75
924	1,2 Dichl-B	7/17/2003	ND	0.6	ug/l	2	0.6		75
925	1,3 Dichl-B	1/3/2002	ND	0.16	ug/l	0.5	0.16		76
926	1,3 Dichl-B	7/18/2002	ND	0.3	ug/l	1	0.3		76
927	1,3 Dichl-B	1/2/2003	ND	0.3	ug/l	0.5	0.3		76
928	1,3 Dichl-B	6/6/2002	ND	0.6	ug/l	1	0.6		76
929	1,3 Dichl-B	7/17/2003	ND	0.6	ug/l	1	0.6		76
930	1,3 Dichl-B	1/15/2004	ND	0.6	ug/l	1	0.6		76
931	1,4-Dichlo	1/3/2002	ND	0.3	ug/l	1	0.3		77
932	1,4-Dichlo	7/18/2002	ND	0.3	ug/l	1	0.3		77
933	1,4-Dichlo	7/17/2003	ND	0.3	ug/l	0.5	0.3		77
934	1,4-Dichlo	6/6/2002	ND	0.6	ug/l	1	0.6		77
935	1,4-Dichlo	1/2/2003	ND	0.6	ug/l	1	0.6		77
936	1,4-Dichlo	1/15/2004	ND	0.6	ug/l	1	0.6		77
937	3,3-Dichlo	6/6/2002	ND	0.3	ug/l	5	0.3		78
938	3,3-Dichlo	7/18/2002	ND	0.3	ug/l	5	0.3		78
939	3,3-Dichlo	1/2/2003	ND	0.3	ug/l	5	0.3		78
940	3,3-Dichlo	7/17/2003	ND	0.3	ug/l	5	0.3		78
941	3,3-Dichlo	1/15/2004	ND	0.3	ug/l	5	0.3		78
942	3,3-Dichlo	1/3/2002	ND	0.4	ug/l	5	0.4		78
943	Diethyl ph	1/3/2002	ND	0.4	ug/l	2	0.4		79
944	Diethyl ph	6/6/2002	ND	0.7	ug/l	2	0.7		79
945	Diethyl ph	7/18/2002	ND	0.7	ug/l	2	0.7		79
946	Diethyl ph	1/2/2003	ND	0.7	ug/l	2	0.7		79
947	Diethyl ph	7/17/2003	ND	0.7	ug/l	2	0.7		79
948	Diethyl ph	1/15/2004	ND	0.7	ug/l	2	0.7		79
949	Dimethyl p	1/3/2002	ND	0.4	ug/l	2	0.4		80
950	Dimethyl p	6/6/2002	ND	0.7	ug/l	2	0.7		80
951	Dimethyl p	7/18/2002	ND	0.7	ug/l	2	0.7		80
952	Dimethyl p	1/2/2003	ND	0.7	ug/l	2	0.7		80
953	Dimethyl p	7/17/2003	ND	0.7	ug/l	2	0.7		80
954	Dimethyl p	1/15/2004	ND	0.7	ug/l	2	0.7		80

Fact Sheet Appendix F-1(2)
C and H Sugar and CSD
Discharge Point 002- Priority Pollutant Effluent Data

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
326	Mercury	11/22/2005		0.034	ug/l				8
327	Mercury	1/7/2003		0.051	ug/l	0.0005	0.00024		8
328	Mercury	8/6/2002		0.055	ug/l	0.0005	0.00024		8
329	Mercury	8/20/2002		0.056	ug/l	0.0005	0.00024		8
330	Mercury	10/1/2002		0.056	ug/l	0.0005	0.00024		8
331	Mercury	6/8/2004		0.056	ug/l	0.0005	0.00024		8
332	Mercury	3/15/2002		0.07	ug/l	0.05	0.008		8
333	Mercury	6/6/2002		0.09	ug/l	0.05	0.008		8
334	Mercury	9/28/2004		0.1	ug/l				8
335	Mercury	4/11/2002		0.12	ug/l	0.05	0.008		8
336	Mercury	3/19/2003		0.15	ug/l	0.001	0.00024		8
337	Mercury	5/9/2003		0.2	ug/l	0.2	0.008		8
338	Mercury	2/18/2003		0.203	ug/l	0.0025	0.00024		8
339	Mercury	9/14/2004		0.43	ug/l				8
340	Mercury	10/26/2004		0.98	ug/l				8
341	Nickel	2/14/2002		2.8	ug/l	0.5	0.2		9
342	Nickel	2/14/2002		2.8	ug/l	0.5	0.2		9
343	Nickel	3/15/2002		3.3	ug/l	0.5	0.2		9
344	Nickel	3/15/2002		3.3	ug/l	0.5	0.2		9
345	Nickel	6/3/2004		3.7	ug/l	0.5	0.2		9
346	Nickel	6/3/2004		3.7	ug/l	0.5	0.2		9
347	Nickel	1/2/2003		3.8	ug/l	0.5	0.2		9
348	Nickel	1/2/2003		3.8	ug/l	0.5	0.2		9
349	Nickel	4/7/2005		4.3	ug/l				9
350	Nickel	8/11/2005		4.3	ug/l				9
351	Nickel	4/10/2003		4.4	ug/l	0.5	0.2		9
352	Nickel	4/10/2003		4.4	ug/l	0.5	0.2		9
353	Nickel	1/2/2004		4.5	ug/l	0.5	0.2		9
354	Nickel	1/2/2004		4.5	ug/l	0.5	0.2		9
355	Nickel	11/3/2005		4.5	ug/l				9
356	Nickel	12/1/2005		4.5	ug/l				9
357	Nickel	7/14/2005		4.7	ug/l				9
358	Nickel	11/7/2002		4.9	ug/l	0.5	0.2		9
359	Nickel	11/7/2002		4.9	ug/l	0.5	0.2		9
360	Nickel	2/10/2005		4.9	ug/l				9
361	Nickel	5/9/2003		5	ug/l	0.5	0.2		9
362	Nickel	3/11/2004		5	ug/l	0.5	0.2		9
363	Nickel	5/9/2003		5	ug/l	0.5	0.2		9
364	Nickel	3/11/2004		5	ug/l	0.5	0.2		9
365	Nickel	2/12/2004		5.1	ug/l	0.5	0.2		9
366	Nickel	2/12/2004		5.1	ug/l	0.5	0.2		9
367	Nickel	3/10/2005		5.2	ug/l				9
368	Nickel	10/6/2005		5.2	ug/l				9
369	Nickel	12/5/2002		5.3	ug/l	0.5	0.2		9
370	Nickel	1/15/2004		5.3	ug/l	0.5	0.2		9
371	Nickel	12/5/2002		5.3	ug/l	0.5	0.2		9
372	Nickel	1/15/2004		5.3	ug/l	0.5	0.2		9
373	Nickel	11/4/2004		5.5	ug/l				9
374	Nickel	9/8/2005		5.5	ug/l				9
375	Nickel	12/2/2004		5.7	ug/l				9
376	Nickel	1/13/2005		5.7	ug/l				9
377	Nickel	7/17/2003		5.8	ug/l	0.5	0.2		9
378	Nickel	7/17/2003		5.8	ug/l	0.5	0.2		9
379	Nickel	10/7/2004		5.8	ug/l				9
380	Nickel	6/2/2005		5.8	ug/l				9

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
955	Di-n-butyl	1/3/2002	ND	0.4	ug/l	5	0.4		81
956	Di-n-butyl	6/6/2002	ND	1	ug/l	5	1		81
957	Di-n-butyl	7/18/2002	ND	1	ug/l	5	1		81
958	Di-n-butyl	1/2/2003	ND	1	ug/l	5	1		81
959	Di-n-butyl	7/17/2003	ND	1	ug/l	5	1		81
960	Di-n-butyl	1/15/2004	ND	1	ug/l	5	1		81
961	2,4-Dinitr	1/3/2002	ND	0.3	ug/l	5	0.3		82
962	2,4-Dinitr	6/6/2002	ND	0.6	ug/l	5	0.6		82
963	2,4-Dinitr	7/18/2002	ND	0.6	ug/l	5	0.6		82
964	2,4-Dinitr	1/2/2003	ND	0.6	ug/l	5	0.6		82
965	2,4-Dinitr	7/17/2003	ND	0.6	ug/l	5	0.6		82
966	2,4-Dinitr	1/15/2004	ND	0.6	ug/l	5	0.6		82
967	2,6-Dntoluen	1/3/2002	ND	0.3	ug/l	5	0.3		83
968	2,6-Dntoluen	6/6/2002	ND	0.6	ug/l	5	0.6		83
969	2,6-Dntoluen	7/18/2002	ND	0.6	ug/l	5	0.6		83
970	2,6-Dntoluen	1/2/2003	ND	0.6	ug/l	5	0.6		83
971	2,6-Dntoluen	7/17/2003	ND	0.6	ug/l	5	0.6		83
972	2,6-Dntoluen	1/15/2004	ND	0.6	ug/l	5	0.6		83
973	DI-N-Octpht	1/3/2002	ND	0.4	ug/l	5	0.4		84
974	DI-N-Octpht	6/6/2002	ND	0.9	ug/l	5	0.9		84
975	DI-N-Octpht	7/18/2002	ND	0.9	ug/l	5	0.9		84
976	DI-N-Octpht	1/2/2003	ND	0.9	ug/l	5	0.9		84
977	DI-N-Octpht	7/17/2003	ND	0.9	ug/l	5	0.9		84
978	DI-N-Octpht	1/15/2004	ND	0.9	ug/l	5	0.9		84
979	1,2-Diphen	1/3/2002	ND	0.3	ug/l	1	0.3		85
980	1,2-Diphen	6/6/2002	ND	0.6	ug/l	1	0.6		85
981	1,2-Diphen	7/18/2002	ND	0.6	ug/l	1	0.6		85
982	1,2-Diphen	1/2/2003	ND	0.6	ug/l	1	0.6		85
983	1,2-Diphen	7/17/2003	ND	0.6	ug/l	1	0.6		85
984	1,2-Diphen	1/15/2004	ND	0.6	ug/l	1	0.6		85
985	Fluoranthe	1/3/2002	ND	0.03	ug/l	0.05	0.03		86
986	Fluoranthe	6/6/2002	ND	0.03	ug/l	0.05	0.03		86
987	Fluoranthe	11/7/2002	ND	0.03	ug/l	0.05	0.03		86
988	Fluoranthe	1/2/2003	ND	0.03	ug/l	0.05	0.03		86
989	Fluoranthe	7/17/2003	ND	0.03	ug/l	0.05	0.03		86
990	Fluoranthe	1/15/2004	ND	0.03	ug/l	0.05	0.03		86
991	FLUORENE	1/3/2002	ND	0.02	ug/l	0.1	0.02		87
992	FLUORENE	6/6/2002	ND	0.02	ug/l	0.1	0.02		87
993	FLUORENE	11/7/2002	ND	0.02	ug/l	0.1	0.02		87
994	FLUORENE	1/2/2003	ND	0.02	ug/l	0.1	0.02		87
995	FLUORENE	7/17/2003	ND	0.02	ug/l	0.1	0.02		87
996	FLUORENE	1/15/2004	ND	0.02	ug/l	0.1	0.02		87
997	HCB	1/3/2002	ND	0.4	ug/l	1	0.4		88
998	HCB	6/6/2002	ND	0.4	ug/l	1	0.4		88
999	HCB	7/18/2002	ND	0.4	ug/l	1	0.4		88
1000	HCB	1/2/2003	ND	0.4	ug/l	1	0.4		88
1001	HCB	7/17/2003	ND	0.4	ug/l	1	0.4		88
1002	HCB	1/15/2004	ND	0.4	ug/l	1	0.4		88
1003	HBU	1/3/2002	ND	0.2	ug/l	1	0.2		89
1004	HBU	6/6/2002	ND	0.7	ug/l	1	0.7		89
1005	HBU	7/18/2002	ND	0.7	ug/l	1	0.7		89
1006	HBU	1/2/2003	ND	0.7	ug/l	1	0.7		89
1007	HBU	7/17/2003	ND	0.7	ug/l	1	0.7		89
1008	HBU	1/15/2004	ND	0.7	ug/l	1	0.7		89
1009	HCP	1/3/2002	ND	0.1	ug/l	5	0.1		90

Fact Sheet Appendix F-1(2)
C and H Sugar and CSD
Discharge Point 002- Priority Pollutant Effluent Data

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
381	Nickel	4/11/2002		5.9	ug/l	0.5	0.2		9
382	Nickel	4/8/2004		5.9	ug/l	0.5	0.2		9
383	Nickel	4/11/2002		5.9	ug/l	0.5	0.2		9
384	Nickel	4/8/2004		5.9	ug/l	0.5	0.2		9
385	Nickel	6/5/2003		6.1	ug/l	0.5	0.2		9
386	Nickel	6/5/2003		6.1	ug/l	0.5	0.2		9
387	Nickel	10/9/2003		6.2	ug/l	0.5	0.2		9
388	Nickel	10/9/2003		6.2	ug/l	0.5	0.2		9
389	Nickel	5/5/2005		6.2	ug/l				9
390	Nickel	5/9/2002		6.5	ug/l	0.5	0.2		9
391	Nickel	5/9/2002		6.5	ug/l	0.5	0.2		9
392	Nickel	9/9/2004		6.6	ug/l				9
393	Nickel	6/6/2002		6.7	ug/l	0.5	0.2		9
394	Nickel	6/6/2002		6.7	ug/l	0.5	0.2		9
395	Nickel	8/12/2004		6.7	ug/l				9
396	Nickel	7/31/2003		6.8	ug/l	0.5	0.2		9
397	Nickel	7/31/2003		6.8	ug/l	0.5	0.2		9
398	Nickel	10/10/2002		7	ug/l	1	0.2		9
399	Nickel	10/10/2002		7	ug/l	1	0.2		9
400	Nickel	7/1/2004		7.3	ug/l	0.5	0.2		9
401	Nickel	7/1/2004		7.3	ug/l	0.5	0.2		9
402	Nickel	2/13/2003		7.6	ug/l	0.5	0.2		9
403	Nickel	2/13/2003		7.6	ug/l	0.5	0.2		9
404	Nickel	7/4/2002		8	ug/l	0.5	0.2		9
405	Nickel	7/4/2002		8	ug/l	0.5	0.2		9
406	Nickel	11/7/2003		8.1	ug/l	0.5	0.2		9
407	Nickel	11/7/2003		8.1	ug/l	0.5	0.2		9
408	Nickel	8/1/2002		8.6	ug/l	0.5	0.2		9
409	Nickel	8/1/2002		8.6	ug/l	0.5	0.2		9
410	Nickel	12/4/2003		8.7	ug/l	0.5	0.2		9
411	Nickel	12/4/2003		8.7	ug/l	0.5	0.2		9
412	Nickel	9/12/2002		9	ug/l	1	0.2		9
413	Nickel	9/12/2002		9	ug/l	1	0.2		9
414	Nickel	8/28/2003		9.4	ug/l	0.5	0.2		9
415	Nickel	8/28/2003		9.4	ug/l	0.5	0.2		9
416	Nickel	9/11/2003		9.6	ug/l	0.5	0.2		9
417	Nickel	9/11/2003		9.6	ug/l	0.5	0.2		9
418	Nickel	9/23/2003		13	ug/l				9
419	Selenium	3/15/2002	ND	0.5	ug/l	1	0.5		10
420	Selenium	4/11/2002	ND	0.5	ug/l	1	0.5		10
421	Selenium	6/6/2002	ND	0.5	ug/l	1	0.5		10
422	Selenium	8/1/2002	ND	0.5	ug/l	1	0.5		10
423	Selenium	9/12/2002	ND	0.5	ug/l	4	0.5		10
424	Selenium	10/10/2002	ND	0.5	ug/l	4	0.5		10
425	Selenium	11/7/2002	ND	0.5	ug/l	2	0.5		10
426	Selenium	1/2/2003	ND	0.5	ug/l	2	0.5		10
427	Selenium	4/10/2003	ND	0.5	ug/l	2	0.5		10
428	Selenium	5/9/2003	ND	0.5	ug/l	2	0.5		10
429	Selenium	6/5/2003	ND	0.5	ug/l	2	0.5		10
430	Selenium	7/31/2003	ND	0.5	ug/l	2	0.5		10
431	Selenium	8/28/2003	ND	0.5	ug/l	2	0.5		10
432	Selenium	9/11/2003	ND	0.5	ug/l	2	0.5		10
433	Selenium	10/9/2003	ND	0.5	ug/l	2	0.5		10
434	Selenium	12/4/2003	ND	0.5	ug/l	2	0.5		10
435	Selenium	1/2/2004	ND	0.5	ug/l	2	0.5		10

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
1010	HCP	6/6/2002	ND	0.4	ug/l	5	0.4		90
1011	HCP	7/18/2002	ND	0.4	ug/l	5	0.4		90
1012	HCP	1/2/2003	ND	0.4	ug/l	5	0.4		90
1013	HCP	7/17/2003	ND	0.4	ug/l	5	0.4		90
1014	HCP	1/15/2004	ND	0.4	ug/l	5	0.4		90
1015	HBE	1/3/2002	ND	0.2	ug/l	1	0.2		91
1016	HBE	6/6/2002	ND	0.6	ug/l	1	0.6		91
1017	HBE	7/18/2002	ND	0.6	ug/l	1	0.6		91
1018	HBE	1/2/2003	ND	0.6	ug/l	1	0.6		91
1019	HBE	7/17/2003	ND	0.6	ug/l	1	0.6		91
1020	HBE	1/15/2004	ND	0.6	ug/l	1	0.6		91
1021	INDENO PYREN	1/3/2002	ND	0.04	ug/l	0.05	0.04		92
1022	INDENO PYREN	6/6/2002	ND	0.04	ug/l	0.05	0.04		92
1023	INDENO PYREN	11/7/2002	ND	0.04	ug/l	0.05	0.04		92
1024	INDENO PYREN	1/2/2003	ND	0.04	ug/l	0.05	0.04		92
1025	INDENO PYREN	7/17/2003	ND	0.04	ug/l	0.05	0.04		92
1026	INDENO PYREN	1/15/2004	ND	0.04	ug/l	0.05	0.04		92
1027	Isophorone	1/3/2002	ND	0.3	ug/l	1	0.3		93
1028	Isophorone	6/6/2002	ND	0.8	ug/l	1	0.8		93
1029	Isophorone	7/18/2002	ND	0.8	ug/l	1	0.8		93
1030	Isophorone	1/2/2003	ND	0.8	ug/l	1	0.8		93
1031	Isophorone	7/17/2003	ND	0.8	ug/l	1	0.8		93
1032	Isophorone	1/15/2004	ND	0.8	ug/l	1	0.8		93
1033	Naphthalene	1/3/2002	ND	0.05	ug/l	0.2	0.05		94
1034	Naphthalene	6/6/2002	ND	0.05	ug/l	0.2	0.05		94
1035	Naphthalene	11/7/2002	ND	0.05	ug/l	0.2	0.05		94
1036	Naphthalene	1/2/2003	ND	0.05	ug/l	0.2	0.05		94
1037	Naphthalene	7/17/2003	ND	0.05	ug/l	0.2	0.05		94
1038	Naphthalene	1/15/2004	ND	0.05	ug/l	0.2	0.05		94
1039	Nitrobenzene	1/3/2002	ND	0.3	ug/l	1	0.3		95
1040	Nitrobenzene	6/6/2002	ND	0.7	ug/l	1	0.7		95
1041	Nitrobenzene	7/18/2002	ND	0.7	ug/l	1	0.7		95
1042	Nitrobenzene	1/2/2003	ND	0.7	ug/l	1	0.7		95
1043	Nitrobenzene	7/17/2003	ND	0.7	ug/l	1	0.7		95
1044	Nitrobenzene	1/15/2004	ND	0.7	ug/l	1	0.7		95
1045	NME	1/3/2002	ND	0.4	ug/l	5	0.4		96
1046	NME	6/6/2002	ND	0.6	ug/l	5	0.6		96
1047	NME	7/18/2002	ND	0.6	ug/l	5	0.6		96
1048	NME	1/2/2003	ND	0.6	ug/l	5	0.6		96
1049	NME	7/17/2003	ND	0.6	ug/l	5	0.6		96
1050	NME	1/15/2004	ND	0.6	ug/l	5	0.6		96
1051	N-nitrodpra	1/3/2002	ND	0.3	ug/l	5	0.3		97
1052	N-nitrodpra	6/6/2002	ND	0.8	ug/l	5	0.8		97
1053	N-nitrodpra	7/18/2002	ND	0.8	ug/l	5	0.8		97
1054	N-nitrodpra	1/2/2003	ND	0.8	ug/l	5	0.8		97
1055	N-nitrodpra	7/17/2003	ND	0.8	ug/l	5	0.8		97
1056	N-nitrodpra	1/15/2004	ND	0.8	ug/l	5	0.8		97
1057	NPH	1/3/2002	ND	0.4	ug/l	1	0.4		98
1058	NPH	6/6/2002	ND	0.7	ug/l	1	0.7		98
1059	NPH	7/18/2002	ND	0.7	ug/l	1	0.7		98
1060	NPH	1/2/2003	ND	0.7	ug/l	1	0.7		98
1061	NPH	7/17/2003	ND	0.7	ug/l	1	0.7		98
1062	NPH	1/15/2004	ND	0.7	ug/l	1	0.7		98
1063	Phenanthrene	1/3/2002	ND	0.03	ug/l	0.05	0.03		99
1064	Phenanthrene	6/6/2002	ND	0.03	ug/l	0.05	0.03		99

Fact Sheet Appendix F-1(2)
C and H Sugar and CSD
Discharge Point 002- Priority Pollutant Effluent Data

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
436	Selenium	1/15/2004	ND	0.5	ug/l	2	0.5		10
437	Selenium	2/12/2004	ND	0.5	ug/l	2	0.5		10
438	Selenium	3/11/2004	ND	0.5	ug/l	2	0.5		10
439	Selenium	4/8/2004	ND	0.5	ug/l	2	0.5		10
440	Selenium	6/3/2004	ND	0.5	ug/l	2	0.5		10
441	Selenium	7/1/2004	ND	0.5	ug/l	2	0.5		10
442	Selenium	7/17/2003	J	0.5	ug/l	2	0.5		10
443	Selenium	5/9/2002	J	0.56	ug/l	2	0.5		10
444	Selenium	7/4/2002	J	0.9	ug/l	1	0.5		10
445	Selenium	2/13/2003	J	0.99	ug/l	1	0.5		10
446	Selenium	12/5/2002	J	1.5	ug/l	2	0.5		10
447	Selenium	11/7/2003	J	1.6	ug/l	2	0.5		10
448	Selenium	2/14/2002		2	ug/l	1	0.3		10
449	Silver	2/14/2002	ND	0.02	ug/l	0.1	0.02		11
450	Silver	3/15/2002	ND	0.02	ug/l	0.1	0.02		11
451	Silver	5/9/2002	ND	0.02	ug/l	0.1	0.02		11
452	Silver	6/6/2002	ND	0.02	ug/l	0.2	0.02		11
453	Silver	7/4/2002	ND	0.02	ug/l	0.1	0.02		11
454	Silver	8/1/2002	ND	0.02	ug/l	0.1	0.02		11
455	Silver	9/12/2002	ND	0.02	ug/l	0.2	0.02		11
456	Silver	10/10/2002	ND	0.02	ug/l	0.2	0.02		11
457	Silver	11/7/2002	ND	0.02	ug/l	0.1	0.02		11
458	Silver	12/5/2002	ND	0.02	ug/l	0.1	0.02		11
459	Silver	1/2/2003	ND	0.02	ug/l	0.1	0.02		11
460	Silver	2/13/2003	ND	0.02	ug/l	0.1	0.02		11
461	Silver	4/10/2003	ND	0.02	ug/l	0.1	0.02		11
462	Silver	5/9/2003	ND	0.02	ug/l	0.1	0.02		11
463	Silver	6/5/2003	ND	0.02	ug/l	0.1	0.02		11
464	Silver	7/17/2003	ND	0.02	ug/l	0.1	0.02		11
465	Silver	7/31/2003	ND	0.02	ug/l	0.1	0.02		11
466	Silver	8/28/2003	ND	0.02	ug/l	0.1	0.02		11
467	Silver	9/11/2003	ND	0.02	ug/l	0.1	0.02		11
468	Silver	10/9/2003	ND	0.02	ug/l	0.1	0.02		11
469	Silver	11/7/2003	ND	0.02	ug/l	0.1	0.02		11
470	Silver	12/4/2003	ND	0.02	ug/l	0.1	0.02		11
471	Silver	1/2/2004	ND	0.02	ug/l	0.1	0.02		11
472	Silver	1/15/2004	ND	0.02	ug/l	0.1	0.02		11
473	Silver	2/12/2004	ND	0.02	ug/l	0.1	0.02		11
474	Silver	3/11/2004	ND	0.02	ug/l	0.1	0.02		11
475	Silver	4/8/2004	ND	0.02	ug/l	0.1	0.02		11
476	Silver	6/3/2004	ND	0.02	ug/l	0.1	0.02		11
477	Silver	7/1/2004	ND	0.02	ug/l	0.1	0.02		11
478	Silver	4/11/2002	J	0.2	ug/l	0.25	0.02		11
479	Thallium	02/14/2002	ND	0.03	ug/L	0.1	0.03		12
480	Thallium	03/15/2002	ND	0.03	ug/L	0.1	0.03		12
481	Thallium	05/09/2002	ND	0.03	ug/L	0.1	0.03		12
482	Thallium	06/06/2002	ND	0.03	ug/L	0.2	0.03		12
483	Thallium	07/04/2002	ND	0.03	ug/L	0.1	0.03		12
484	Thallium	08/01/2002	ND	0.03	ug/L	0.1	0.03		12
485	Thallium	09/12/2002	ND	0.03	ug/L	0.2	0.03		12
486	Thallium	10/10/2002	ND	0.03	ug/L	0.1	0.03		12
487	Thallium	11/07/2002	ND	0.03	ug/L	0.1	0.03		12
488	Thallium	01/02/2003	ND	0.03	ug/L	0.1	0.03		12

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
1065	Phenanthrene	11/7/2002	ND	0.03	ug/l	0.05	0.03		99
1066	Phenanthrene	1/2/2003	ND	0.03	ug/l	0.05	0.03		99
1067	Phenanthrene	7/17/2003	ND	0.03	ug/l	0.05	0.03		99
1068	Phenanthrene	1/15/2004	ND	0.03	ug/l	0.05	0.03		99
1069	Pyrene	1/3/2002	ND	0.03	ug/l	0.05	0.03		100
1070	Pyrene	6/6/2002	ND	0.03	ug/l	0.05	0.03		100
1071	Pyrene	11/7/2002	ND	0.03	ug/l	0.05	0.03		100
1072	Pyrene	1/2/2003	ND	0.03	ug/l	0.05	0.03		100
1073	Pyrene	7/17/2003	ND	0.03	ug/l	0.05	0.03		100
1074	Pyrene	1/15/2004	ND	0.03	ug/l	0.05	0.03		100
1075	1,2,4-Tcbenz	1/3/2002	ND	0.3	ug/l	5	0.3		101
1076	1,2,4-Tcbenz	6/6/2002	ND	0.6	ug/l	5	0.6		101
1077	1,2,4-Tcbenz	7/18/2002	ND	0.6	ug/l	5	0.6		101
1078	1,2,4-Tcbenz	1/2/2003	ND	0.6	ug/l	5	0.6		101
1079	1,2,4-Tcbenz	7/17/2003	ND	0.6	ug/l	5	0.6		101
1080	1,2,4-Tcbenz	1/15/2004	ND	0.6	ug/l	5	0.6		101
1081	Aldrin	1/3/2002	ND	0.003	ug/l	0.005	0.003		102
1082	Aldrin	6/6/2002	ND	0.003	ug/l	0.005	0.003		102
1083	Aldrin	11/7/2002	ND	0.003	ug/l	0.005	0.003		102
1084	Aldrin	1/2/2003	ND	0.003	ug/l	0.005	0.003		102
1085	Aldrin	7/17/2003	ND	0.003	ug/l	0.005	0.003		102
1086	Aldrin	1/15/2004	ND	0.003	ug/l	0.005	0.003		102
1087	A-BHC	1/3/2002	ND	0.002	ug/l	0.01	0.002		103
1088	A-BHC	6/6/2002	ND	0.003	ug/l	0.01	0.003		103
1089	A-BHC	11/7/2002	ND	0.003	ug/l	0.01	0.003		103
1090	A-BHC	1/2/2003	ND	0.003	ug/l	0.01	0.003		103
1091	A-BHC	7/17/2003	ND	0.003	ug/l	0.01	0.003		103
1092	A-BHC	1/15/2004	ND	0.003	ug/l	0.01	0.003		103
1093	B-BHC	1/3/2002	ND	0.001	ug/l	0.005	0.001		104
1094	B-BHC	6/6/2002	ND	0.004	ug/l	0.005	0.004		104
1095	B-BHC	11/7/2002	ND	0.004	ug/l	0.005	0.004		104
1096	B-BHC	1/2/2003	ND	0.004	ug/l	0.005	0.004		104
1097	B-BHC	7/17/2003	ND	0.004	ug/l	0.005	0.004		104
1098	B-BHC	1/15/2004	ND	0.004	ug/l	0.005	0.004		104
1099	G-BHC	1/3/2002	ND	0.001	ug/l	0.01	0.001		105
1100	G-BHC	6/6/2002	ND	0.003	ug/l	0.01	0.003		105
1101	G-BHC	11/7/2002	ND	0.003	ug/l	0.01	0.003		105
1102	G-BHC	1/2/2003	ND	0.003	ug/l	0.01	0.003		105
1103	G-BHC	7/17/2003	ND	0.003	ug/l	0.01	0.003		105
1104	G-BHC	1/15/2004	ND	0.003	ug/l	0.01	0.003		105
1105	Delta-BHC	1/3/2002	ND	0.001	ug/l	0.005	0.001		106
1106	Delta-BHC	6/6/2002	ND	0.002	ug/l	0.005	0.002		106
1107	Delta-BHC	11/7/2002	ND	0.002	ug/l	0.005	0.002		106
1108	Delta-BHC	1/2/2003	ND	0.002	ug/l	0.005	0.002		106
1109	Delta-BHC	7/17/2003	ND	0.002	ug/l	0.005	0.002		106
1110	Delta-BHC	1/15/2004	ND	0.002	ug/l	0.005	0.002		106
1111	Chlordane	1/3/2002	ND	0.005	ug/l	0.02	0.005		107
1112	Chlordane	6/6/2002	ND	0.005	ug/l	0.02	0.005		107
1113	Chlordane	11/7/2002	ND	0.005	ug/l	0.02	0.005		107
1114	Chlordane	1/2/2003	ND	0.005	ug/l	0.02	0.005		107
1115	Chlordane	7/17/2003	ND	0.005	ug/l	0.02	0.005		107
1116	Chlordane	1/15/2004	ND	0.005	ug/l	0.02	0.005		107
1117	4,4'-DDD	1/3/2002	ND	0.001	ug/l	0.01	0.001		108

Fact Sheet Appendix F-1(2)
C and H Sugar and CSD
Discharge Point 002- Priority Pollutant Effluent Data

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
489	Thallium	04/10/2003	ND	0.03	ug/L	0.1	0.03		12
490	Thallium	05/09/2003	ND	0.03	ug/L	0.1	0.03		12
491	Thallium	06/05/2003	ND	0.03	ug/L	0.1	0.03		12
492	Thallium	07/17/2003	ND	0.03	ug/L	0.1	0.03		12
493	Thallium	07/31/2003	ND	0.03	ug/L	0.1	0.03		12
494	Thallium	08/28/2003	ND	0.03	ug/L	0.1	0.03		12
495	Thallium	09/11/2003	ND	0.03	ug/L	0.1	0.03		12
496	Thallium	10/09/2003	ND	0.03	ug/L	0.1	0.03		12
497	Thallium	11/07/2003	ND	0.03	ug/L	0.1	0.03		12
498	Thallium	12/04/2003	ND	0.03	ug/L	0.1	0.03		12
499	Thallium	01/02/2004	ND	0.03	ug/L	0.1	0.03		12
500	Thallium	01/15/2004	ND	0.03	ug/L	0.1	0.03		12
501	Thallium	02/12/2004	ND	0.03	ug/L	0.1	0.03		12
502	Thallium	03/11/2004	ND	0.03	ug/L	0.1	0.03		12
503	Thallium	04/08/2004	ND	0.03	ug/L	0.1	0.03		12
504	Thallium	07/01/2004	ND	0.03	ug/L	0.1	0.03		12
505	Thallium	02/13/2003	J	0.05	ug/L	0.1	0.03		12
506	Thallium	06/03/2004	J	0.08	ug/L	0.1	0.03		12
507	Thallium	12/05/2002	J	0.09	ug/L	0.1	0.03		12
508	Thallium	04/11/2002	J	0.095	ug/L	0.1	0.03		12
509	Zinc	4/10/2003	ND	0.5	ug/l	10	0.5		13
510	Zinc	6/5/2003	ND	0.5	ug/l	10	0.5		13
511	Zinc	7/31/2003	ND	0.5	ug/l	10	0.5		13
512	Zinc	12/4/2003	ND	0.5	ug/l	10	0.5		13
513	Zinc	4/8/2004	ND	0.5	ug/l	10	0.5		13
514	Zinc	9/12/2002	J	7	ug/l	10	0.5		13
515	Zinc	8/28/2003	J	7	ug/l	10	0.5		13
516	Zinc	5/9/2002	J	7.3	ug/l	10	0.5		13
517	Zinc	12/5/2002	J	8	ug/l	10	0.5		13
518	Zinc	7/1/2004	J	8	ug/l	10	0.5		13
519	Zinc	10/10/2002	J	9	ug/l	20	0.5		13
520	Zinc	2/13/2003		6	ug/l	2	0.3		13
521	Zinc	6/3/2004		6	ug/l	2	0.5		13
522	Zinc	4/11/2002		7	ug/l	2	0.5		13
523	Zinc	2/14/2002		8	ug/l	1	0.5		13
524	Zinc	3/15/2002		8	ug/l	1	0.5		13
525	Zinc	7/4/2002		8	ug/l	1	0.3		13
526	Zinc	7/17/2003		9	ug/l	2	0.5		13
527	Zinc	8/1/2002		10	ug/l	1	0.3		13
528	Zinc	1/2/2003		10	ug/l	10	0.5		13
529	Zinc	9/11/2003		10	ug/l	10	0.5		13
530	Zinc	1/2/2004		10	ug/l	10	0.5		13
531	Zinc	1/15/2004		10	ug/l	10	0.5		13
532	Zinc	2/12/2004		10	ug/l	10	0.5		13
533	Zinc	3/11/2004		10	ug/l	10	0.5		13
534	Zinc	6/6/2002		11	ug/l	2	0.3		13
535	Zinc	11/7/2002		20	ug/l	10	0.5		13
536	Zinc	5/9/2003		20	ug/l	10	0.5		13
537	Zinc	11/7/2003		20	ug/l	10	0.5		13
538	Zinc	10/9/2003		30	ug/l	10	0.5		13
539	Cyanide	6/5/2003	ND	0.9	ug/l	3	3		14
540	Cyanide	11/6/2003	ND	0.9	ug/l	3	3		14

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
1118	4,4'-DDD	6/6/2002	ND	0.002	ug/l	0.01	0.002		108
1119	4,4'-DDD	11/7/2002	ND	0.002	ug/l	0.01	0.002		108
1120	4,4'-DDD	1/2/2003	ND	0.002	ug/l	0.01	0.002		108
1121	4,4'-DDD	7/17/2003	ND	0.002	ug/l	0.01	0.002		108
1122	4,4'-DDD	1/15/2004	ND	0.002	ug/l	0.01	0.002		108
1123	4,4'-DDE	1/3/2002	ND	0.001	ug/l	0.01	0.001		109
1124	4,4'-DDE	6/6/2002	ND	0.002	ug/l	0.01	0.002		109
1125	4,4'-DDE	11/7/2002	ND	0.002	ug/l	0.01	0.002		109
1126	4,4'-DDE	1/2/2003	ND	0.002	ug/l	0.01	0.002		109
1127	4,4'-DDE	7/17/2003	ND	0.002	ug/l	0.01	0.002		109
1128	4,4'-DDE	1/15/2004	ND	0.002	ug/l	0.01	0.002		109
1129	4,4'-DDT	1/3/2002	ND	0.001	ug/l	0.01	0.001		110
1130	4,4'-DDT	6/6/2002	ND	0.003	ug/l	0.01	0.003		110
1131	4,4'-DDT	11/7/2002	ND	0.003	ug/l	0.01	0.003		110
1132	4,4'-DDT	1/2/2003	ND	0.003	ug/l	0.01	0.003		110
1133	4,4'-DDT	7/17/2003	ND	0.003	ug/l	0.01	0.003		110
1134	4,4'-DDT	1/15/2004	ND	0.003	ug/l	0.01	0.003		110
1135	Dieldrin	1/3/2002	ND	0.002	ug/l	0.01	0.002		111
1136	Dieldrin	6/6/2002	ND	0.002	ug/l	0.01	0.002		111
1137	Dieldrin	11/7/2002	ND	0.002	ug/l	0.01	0.002		111
1138	Dieldrin	1/2/2003	ND	0.002	ug/l	0.01	0.002		111
1139	Dieldrin	7/17/2003	ND	0.002	ug/l	0.01	0.002		111
1140	Dieldrin	1/15/2004	ND	0.002	ug/l	0.01	0.002		111
1141	Endosulfan-A	6/6/2002	ND	0.002	ug/l	0.01	0.002		112
1142	Endosulfan-A	11/7/2002	ND	0.002	ug/l	0.01	0.002		112
1143	Endosulfan-A	1/2/2003	ND	0.002	ug/l	0.01	0.002		112
1144	Endosulfan-A	7/17/2003	ND	0.002	ug/l	0.01	0.002		112
1145	Endosulfan-A	1/15/2004	ND	0.002	ug/l	0.01	0.002		112
1146	Endosulfan-A	1/3/2002	ND	0.003	ug/l	0.01	0.003		112
1147	Endosulfan-B	1/3/2002	ND	0.001	ug/l	0.01	0.001		113
1148	Endosulfan-B	6/6/2002	ND	0.002	ug/l	0.01	0.002		113
1149	Endosulfan-B	11/7/2002	ND	0.002	ug/l	0.01	0.002		113
1150	Endosulfan-B	1/2/2003	ND	0.002	ug/l	0.01	0.002		113
1151	Endosulfan-B	7/17/2003	ND	0.002	ug/l	0.01	0.002		113
1152	Endosulfan-B	1/15/2004	ND	0.002	ug/l	0.01	0.002		113
1153	Endosulf SO4	1/3/2002	ND	0.001	ug/l	0.01	0.001		114
1154	Endosulf SO4	6/6/2002	ND	0.002	ug/l	0.01	0.002		114
1155	Endosulf SO4	11/7/2002	ND	0.002	ug/l	0.01	0.002		114
1156	Endosulf SO4	1/2/2003	ND	0.002	ug/l	0.01	0.002		114
1157	Endosulf SO4	7/17/2003	ND	0.002	ug/l	0.01	0.002		114
1158	Endosulf SO4	1/15/2004	ND	0.002	ug/l	0.01	0.002		114
1159	Endrin	1/3/2002	ND	0.002	ug/l	0.01	0.002		115
1160	Endrin	6/6/2002	ND	0.002	ug/l	0.01	0.002		115
1161	Endrin	11/7/2002	ND	0.002	ug/l	0.01	0.002		115
1162	Endrin	1/2/2003	ND	0.002	ug/l	0.01	0.002		115
1163	Endrin	7/17/2003	ND	0.002	ug/l	0.01	0.002		115
1164	Endrin	1/15/2004	ND	0.002	ug/l	0.01	0.002		115
1165	Endrin Aldeh	1/3/2002	ND	0.002	ug/l	0.01	0.002		116
1166	Endrin Aldeh	6/6/2002	ND	0.002	ug/l	0.01	0.002		116
1167	Endrin Aldeh	11/7/2002	ND	0.002	ug/l	0.01	0.002		116
1168	Endrin Aldeh	1/2/2003	ND	0.002	ug/l	0.01	0.002		116
1169	Endrin Aldeh	7/17/2003	ND	0.002	ug/l	0.01	0.002		116

Fact Sheet Appendix F-1(2)
C and H Sugar and CSD
Discharge Point 002- Priority Pollutant Effluent Data

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
541	Cyanide	9/11/2003	ND	0.9	ug/l	3	0.9		14
542	Cyanide	6/3/2004	ND	0.9	ug/l	3	0.9		14
543	Cyanide	7/1/2004	ND	0.9	ug/l	3	0.9		14
544	Cyanide	2/13/2003	J	1	ug/l	3	0.9		14
545	Cyanide	12/5/2002	J	1.3	ug/l	3	0.9		14
546	Cyanide	12/4/2003	J	1.9	ug/l	3	0.9		14
547	Cyanide	8/1/2002		0.004	ug/l	0.003	0.0008		14
548	Cyanide	5/9/2002		0.012	ug/l	0.003	0.0006		14
549	Cyanide	6/6/2002		0.012	ug/l	0.003	0.0006		14
550	Cyanide	10/10/2002		0.013	ug/l	0.003	0.0009		14
551	Cyanide	1/2/2003		3	ug/l	3	0.9		14
552	Cyanide	8/14/2003		3	ug/l	3	0.9		14
553	Cyanide	4/11/2002		4	ug/l	3	0.6		14
554	Cyanide	10/9/2003		4	ug/l	3	0.9		14
555	Cyanide	5/6/2004		4	ug/l	3	0.9		14
556	Cyanide	5/8/2003		5	ug/l	3	0.9		14
557	Cyanide	7/17/2003		5	ug/l	3	0.9		14
558	Cyanide	1/3/2002		8	ug/l	3	0.6		14
559	Cyanide	7/18/2002		8	ug/l	3	1.4		14
560	Cyanide	11/7/2002		8	ug/l	3	0.9		14
561	Cyanide	2/12/2004		8	ug/l	3	0.9		14
562	Cyanide	3/11/2004		9	ug/l	3	0.9		14
563	Cyanide	3/13/2003		10	ug/l	3	0.9		14
564	Cyanide	4/10/2003		10	ug/l	3	0.9		14
565	Cyanide	2/14/2002		11	ug/l	3	0.6		14
566	Cyanide	1/15/2004		11	ug/l	3	0.9		14
567	Cyanide	4/8/2004		12	ug/l	3	0.9		14
568	Cyanide	9/12/2002		19	ug/l	3	0.9		14
569	Dioxin								16
570	Acrolein	6/6/2002	ND	1	ug/l	10	1		17
571	Acrolein	7/18/2002	ND	1	ug/l	10	1		17
572	Acrolein	1/2/2003	ND	1	ug/l	5	1		17
573	Acrolein	7/17/2003	ND	1	ug/l	5	1		17
574	Acrolein	1/15/2004	ND	1	ug/l	5	1		17
575	Acrolein	1/3/2002	ND	3.3	ug/l	5	3.3		17
576	Acrylonitr	6/6/2002	ND	1	ug/l	10	1		18
577	Acrylonitr	7/18/2002	ND	1	ug/l	10	1		18
578	Acrylonitr	1/2/2003	ND	1	ug/l	2	1		18
579	Acrylonitr	7/17/2003	ND	1	ug/l	2	1		18
580	Acrylonitr	1/15/2004	ND	1	ug/l	2	1		18
581	Acrylonitr	1/3/2002	ND	1.6	ug/l	2	1.6		18
582	Benzene	1/3/2002	ND	0.27	ug/l	0.5	0.27		19
583	Benzene	6/6/2002	ND	0.3	ug/l	1	0.3		19
584	Benzene	7/18/2002	ND	0.3	ug/l	1	0.3		19
585	Benzene	1/2/2003	ND	0.3	ug/l	0.5	0.3		19
586	Benzene	7/17/2003	ND	0.3	ug/l	0.5	0.3		19
587	Benzene	1/15/2004	ND	0.3	ug/l	0.5	0.3		19
588	Bromoform	6/6/2002	ND	0.2	ug/l	1	0.2		20
589	Bromoform	7/18/2002	ND	0.2	ug/l	1	0.2		20
590	Bromoform	1/2/2003	ND	0.2	ug/l	0.5	0.2		20
591	Bromoform	7/17/2003	ND	0.2	ug/l	0.5	0.2		20
592	Bromoform	1/15/2004	ND	0.2	ug/l	0.5	0.2		20
593	Bromoform	1/3/2002		0.9	ug/l	0.5	0.1		20
594	Carbon tet	1/3/2002	ND	0.42	ug/l	0.5	0.42		21
595	Carbon tet	6/6/2002	ND	0.42	ug/l	1	0.42		21

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
1170	Endrin Aldeh	1/15/2004	ND	0.002	ug/l	0.01	0.002		116
1171	Heptachlor	1/3/2002	ND	0.003	ug/l	0.01	0.003		117
1172	Heptachlor	6/6/2002	ND	0.003	ug/l	0.01	0.003		117
1173	Heptachlor	11/7/2002	ND	0.003	ug/l	0.01	0.003		117
1174	Heptachlor	1/2/2003	ND	0.003	ug/l	0.01	0.003		117
1175	Heptachlor	7/17/2003	ND	0.003	ug/l	0.01	0.003		117
1176	Heptachlor	1/15/2004	ND	0.003	ug/l	0.01	0.003		117
1177	Heptchl	1/3/2002	ND	0.002	ug/l	0.01	0.002		118
1178	Heptchl	6/6/2002	ND	0.003	ug/l	0.01	0.003		118
1179	Heptchl	11/7/2002	ND	0.003	ug/l	0.01	0.003		118
1180	Heptchl	1/2/2003	ND	0.003	ug/l	0.01	0.003		118
1181	Heptchl	7/17/2003	ND	0.003	ug/l	0.01	0.003		118
1182	Heptchl	1/15/2004	ND	0.003	ug/l	0.01	0.003		118
1183	PCB-1016	6/6/2002	ND	0.05	ug/l	0.1	0.05		119
1184	PCB-1016	11/7/2002	ND	0.05	ug/l	0.1	0.05		119
1185	PCB-1016	1/2/2003	ND	0.05	ug/l	0.1	0.05		119
1186	PCB-1016	7/17/2003	ND	0.05	ug/l	0.1	0.05		119
1187	PCB-1016	1/15/2004	ND	0.05	ug/l	0.1	0.05		119
1188	PCB-1016	1/3/2002	ND	0.08	ug/l	0.1	0.08		119
1189	PCB-1221	1/3/2002	ND	0.03	ug/l	0.1	0.03		120
1190	PCB-1221	6/6/2002	ND	0.03	ug/l	0.1	0.03		120
1191	PCB-1221	11/7/2002	ND	0.03	ug/l	0.1	0.03		120
1192	PCB-1221	1/2/2003	ND	0.03	ug/l	0.1	0.03		120
1193	PCB-1221	7/17/2003	ND	0.03	ug/l	0.1	0.03		120
1194	PCB-1221	1/15/2004	ND	0.03	ug/l	0.1	0.03		120
1195	PCB-1232	1/3/2002	ND	0.04	ug/l	0.1	0.04		121
1196	PCB-1232	6/6/2002	ND	0.04	ug/l	0.1	0.04		121
1197	PCB-1232	11/7/2002	ND	0.04	ug/l	0.1	0.04		121
1198	PCB-1232	1/2/2003	ND	0.04	ug/l	0.1	0.04		121
1199	PCB-1232	7/17/2003	ND	0.04	ug/l	0.1	0.04		121
1200	PCB-1232	1/15/2004	ND	0.04	ug/l	0.1	0.04		121
1201	PCB-1242	6/6/2002	ND	0.05	ug/l	0.1	0.05		122
1202	PCB-1242	11/7/2002	ND	0.05	ug/l	0.1	0.05		122
1203	PCB-1242	1/2/2003	ND	0.05	ug/l	0.1	0.05		122
1204	PCB-1242	7/17/2003	ND	0.05	ug/l	0.1	0.05		122
1205	PCB-1242	1/15/2004	ND	0.05	ug/l	0.1	0.05		122
1206	PCB-1242	1/3/2002	ND	0.08	ug/l	0.1	0.08		122
1207	PCB-1248	1/3/2002	ND	0.05	ug/l	0.1	0.05		123
1208	PCB-1248	6/6/2002	ND	0.05	ug/l	0.1	0.05		123
1209	PCB-1248	11/7/2002	ND	0.05	ug/l	0.1	0.05		123
1210	PCB-1248	1/2/2003	ND	0.05	ug/l	0.1	0.05		123
1211	PCB-1248	7/17/2003	ND	0.05	ug/l	0.1	0.05		123
1212	PCB-1248	1/15/2004	ND	0.05	ug/l	0.1	0.05		123
1213	PCB-1254	1/3/2002	ND	0.05	ug/l	0.1	0.05		124
1214	PCB-1254	6/6/2002	ND	0.05	ug/l	0.1	0.05		124
1215	PCB-1254	11/7/2002	ND	0.05	ug/l	0.1	0.05		124
1216	PCB-1254	1/2/2003	ND	0.05	ug/l	0.1	0.05		124
1217	PCB-1254	7/17/2003	ND	0.05	ug/l	0.1	0.05		124
1218	PCB-1254	1/15/2004	ND	0.05	ug/l	0.1	0.05		124
1219	PCB-1260	1/3/2002	ND	0.07	ug/l	0.1	0.07		125
1220	PCB-1260	6/6/2002	ND	0.07	ug/l	0.1	0.07		125
1221	PCB-1260	11/7/2002	ND	0.07	ug/l	0.1	0.07		125
1222	PCB-1260	1/2/2003	ND	0.07	ug/l	0.1	0.07		125
1223	PCB-1260	7/17/2003	ND	0.07	ug/l	0.1	0.07		125
1224	PCB-1260	1/15/2004	ND	0.07	ug/l	0.1	0.07		125

Fact Sheet Appendix F-1(2)
C and H Sugar and CSD
Discharge Point 002- Priority Pollutant Effluent Data

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
596	Carbon tet	7/18/2002	ND	0.42	ug/l	1	0.42		21
597	Carbon tet	1/2/2003	ND	0.42	ug/l	0.5	0.42		21
598	Carbon tet	7/17/2003	ND	0.42	ug/l	0.5	0.42		21
599	Carbon tet	1/15/2004	ND	0.42	ug/l	0.5	0.42		21
600	Chlorobenz	1/3/2002	ND	0.19	ug/l	0.5	0.19		22
601	Chlorobenz	6/6/2002	ND	0.3	ug/l	1	0.3		22
602	Chlorobenz	7/18/2002	ND	0.3	ug/l	1	0.3		22
603	Chlorobenz	1/2/2003	ND	0.3	ug/l	0.5	0.3		22
604	Chlorobenz	7/17/2003	ND	0.3	ug/l	0.5	0.3		22
605	Chlorobenz	1/15/2004	ND	0.3	ug/l	0.5	0.3		22
606	ClDibromthan	7/18/2002	ND	0.3	ug/l	1	0.3		23
607	ClDibromthan	6/6/2002	J	0.5	ug/l	1	0.3		23
608	ClDibromthan	7/17/2003		1.8	ug/l	0.5	0.3		23
609	ClDibromthan	1/2/2003		3.5	ug/l	0.5	0.3		23
610	ClDibromthan	1/15/2004		4.6	ug/l	0.5	0.3		23
611	ClDibromthan	1/3/2002		16	ug/l	0.5	0.18		23
612	Chloroethane	1/3/2002	ND	0.34	ug/l	0.5	0.34		24
613	Chloroethane	6/6/2002	ND	0.34	ug/l	1	0.34		24
614	Chloroethane	7/18/2002	ND	0.34	ug/l	1	0.34		24
615	Chloroethane	1/2/2003	ND	0.34	ug/l	0.5	0.34		24
616	Chloroethane	7/17/2003	ND	0.34	ug/l	0.5	0.34		24
617	Chloroethane	1/15/2004	ND	0.34	ug/l	0.5	0.34		24
618	2-CEV Ether	1/3/2002	ND	0.31	ug/l	1	0.31		25
619	2-CEV Ether	6/6/2002	ND	0.32	ug/l	1	0.32		25
620	2-CEV Ether	7/18/2002	ND	0.32	ug/l	1	0.32		25
621	2-CEV Ether	1/2/2003	ND	0.32	ug/l	1	0.32		25
622	2-CEV Ether	7/17/2003	ND	0.32	ug/l	1	0.32		25
623	2-CEV Ether	1/15/2004	ND	0.32	ug/l	1	0.32		25
624	Chloroform	1/3/2002		27	ug/l	0.5	0.24		26
625	Chloroform	1/2/2003		41	ug/l	0.5	0.31		26
626	Chloroform	1/15/2004		46	ug/l	2.5	0.31		26
627	Chloroform	7/18/2002		80	ug/l	1	0.31		26
628	Chloroform	7/17/2003		91	ug/l	1	0.31		26
629	Chloroform	6/6/2002		210	ug/l	10	0.31		26

NO.	Pollutant	Date	GTLT	Value	Unit	ML	MDL	RDL	CTR
1225	Toxaphene	1/3/2002	ND	0.2	ug/l	0.5	0.2		126
1226	Toxaphene	6/6/2002	ND	0.4	ug/l	0.5	0.4		126
1227	Toxaphene	11/7/2002	ND	0.4	ug/l	0.5	0.4		126
1228	Toxaphene	1/2/2003	ND	0.4	ug/l	0.5	0.4		126
1229	Toxaphene	7/17/2003	ND	0.4	ug/l	0.5	0.4		126
1230	Toxaphene	1/15/2004	ND	0.4	ug/l	0.5	0.4		126
1231	cis-1,3-DiClpe	6/6/2002	ND	0.2	ug/l	0.5	0.2		32-cis
1232	cis-1,3-DiClpe	7/18/2002	ND	0.2	ug/l	0.5	0.2		32-cis
1233	cis-1,3-DiClpe	1/2/2003	ND	0.2	ug/l	0.5	0.2		32-cis
1234	cis-1,3-DiClpe	7/17/2003	ND	0.2	ug/l	0.5	0.2		32-cis
1235	cis-1,3-DiClpe	1/15/2004	ND	0.2	ug/l	0.5	0.2		32-cis
1236	cis-1,3-DiClpe	1/3/2002	ND	0.25	ug/l	0.5	0.25		32-cis
1237	trans-1,3DiClpe	1/3/2002	ND	0.22	ug/l	0.5	0.22		32-tran
1238	trans-1,3DiClpe	6/6/2002	ND	0.3	ug/l	0.5	0.3		32-tran
1239	trans-1,3DiClpe	7/18/2002	ND	0.3	ug/l	0.5	0.3		32-tran
1240	trans-1,3DiClpe	1/2/2003	ND	0.3	ug/l	0.5	0.3		32-tran
1241	trans-1,3DiClpe	7/17/2003	ND	0.3	ug/l	0.5	0.3		32-tran
1242	trans-1,3DiClpe	1/15/2004	ND	0.3	ug/l	0.5	0.3		32-tran
1243	Chlorpyrifos	7/18/2002	ND	0.2	ug/l	0.5	0.2		B
1244	Chlorpyrifos	1/2/2003	ND	0.2	ug/l	0.5	0.2		B
1245	Chlorpyrifos	1/15/2004	ND	0.04	ug/l	0.05	0.04		B
1246	Diazinon	7/18/2002	ND	0.3	ug/l	0.6	0.3		C
1247	Diazinon	1/2/2003	ND	0.3	ug/l	0.6	0.3		C
1248	Diazinon	1/15/2004	ND	0.04	ug/l	0.05	0.04		C
1249	Tributyltin	7/18/2002	ND	0.00408	ug/l		0.00159		
1250	Tributyltin	1/2/2003	ND	0.00408	ug/l		0.00148		
1251	Tributyltin	1/15/2004	ND	0.000465	ug/l		0.00145		

Appendix F-2(1)
Reasonable Potential Analysis Results for Discharge Point 001

Fact Sheet Appendix F-2(1)
C and H Sugar and CSD - Discharge Point 001
Reasonable Potential Analysis Results

Beginning			Step 2	Step 3					Step 4		Step 2	Step 3		Step 4.	Step 5.	Step 6.	Step 7 & 8.		
	Constituent name	C (µg/L) Lowest (most stringent) Criteria [a] (Enter "No Criteria" for no criteria)	Effluent Data Available?	Are all data points non-detects?	Minimum MDL (ug/L) if all data ND.	Enter the pollutant effluent detected max conc (ug/L)	If all data points are ND and MinDL>C, interim monitoring is required	Maximum Pollutant Concentration (MEC) (ug/L) (MEC= deteted max value; if all ND & MDL<C then MEC = MDL)	MEC vs. C Y if If MEC >= C, effluent limitation is required; 2. If MEC<C, go to Step 5	K	Background Data Available?	Are all background data points non-detects?	If all background data points ND Enter the min detection limit (MDL) (ug/L)	Enter the pollutant background detected max conc (ug/L)	If all B is ND, is MDL>C? (If Y, Go To Step 7)	B vs. C If B>C, effluent limitation is required	7) Review other information in the SIP page 4. Y if other information indicates limits are required. If information is unavailable or insufficient: 8) the RWQCB shall establish interim monitoring requirements.	RPA Result	Reason
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	r	S	T
1	Antimony	4300	Y	N		0.6		0.6	MEC<C, go to Step 5		Y			1.8		B<C, Step 7			
2	Arsenic [b]	36	Y	N		45		45	Y		Y			2.46		B<C, Step 7		Y	MEC => C [45.000 ug/l vs 36.000 ug/l]
3	Beryllium	No Criteria	Y	Y	0.06		No Criteria	0.06	No Criteria		Y			0.215		No Criteria	No Criteria		Uo - No Criteria
4	Cadmium [b]	0.637415878	Y			0.6		0.6	MEC<C, go to Step 5		Y			0.1268		B<C, Step 7			
5a	Chromium (III)	113.4671795	Y	N		40		40	MEC<C, go to Step 5							No detected value of B, Step 7			
5b	Chromium (VI) [b]	11.43451143	Y	Y	0.9		MDL<=C, MDL=MEC	0.9	MEC<C, go to Step 5		Y			4.4		B<C, Step 7			
6	Copper	7.164	Y	N		20		20	Y		Y			2.55		B<C, Step 7		Y	MEC => C [20.0 ug/l vs 7.16 ug/l]
7	Lead [b]	1.249869176	Y	N		2.6		2.6	Y		Y			0.804		B<C, Step 7		Y	MEC => C [2.600 ug/l vs 1.250 ug/l]
8	Mercury (303d listed) [b]	0.025	Y	N		0.082		0.082	Y		Y			0.0086		B<C, Step 7		Y	MEC => C [0.08 ug/l vs 0.03 ug/l]
9	Nickel [b]	30.37037037	Y	N		160		160	Y		Y			3.73		B<C, Step 7		Y	MEC => C [160.000 ug/l vs 30.370 ug/l]
10	Selenium (303d listed) [b]	5	Y	N		26		26	Y		Y			0.39		B<C, Step 7		Y	MEC => C [26.000 ug/l vs 5.000 ug/l]
11	Silver [b]	1.148510332	Y	N		0.03		0.03	MEC<C, go to Step 5		Y			0.052		B<C, Step 7			
12	Thallium	6.3	Y	N		0.18		0.18	MEC<C, go to Step 5		Y			0.21		B<C, Step 7			
13	Zinc [b]	64.33273609	Y	N		220		220	Y		Y			5.1		B<C, Step 7		Y	MEC => C [220.000 ug/l vs 64.333 ug/l]
14	Cyanide [b]	1	Y	N		4		4	Y		Y	Y	0.4		N	No detected value of B, Step 7		Y	MEC => C [4.0 ug/l vs 1.0 ug/l]
15	Asbestos	No Criteria	N			0	No Criteria		No Criteria							No Criteria	No Criteria		Uo - No Criteria
16	2,3,7,8-TCDD (303d listed)	0.000000014	Y	Y	0.000000637						Y	Y	0.0000003500		Y	No detected value of B, Step 7			
16-TEQ	2,3,7,8 -TEQ (303d listed)	0.000000014	Y	N		5.617E-08		5.617E-08	Y		Y			0.000000071		Y	Y	Y	MEC => C [5.62E-08 ug/l vs 1.40E-08 ug/l]
17	Acrolein	780	Y	Y	0.56		MDL<=C, MDL=MEC	0.56	MEC<C, go to Step 5		Y	Y	0.5		N	No detected value of B, Step 7			
18	Acrylonitrile	0.66	Y	Y	0.33		MDL<=C, MDL=MEC	0.33	MEC<C, go to Step 5		Y			0.03		B<C, Step 7			
19	Benzene	71	Y	N		1.6		1.6	MEC<C, go to Step 5		Y	Y	0.05		N	No detected value of B, Step 7			
20	Bromoform	360	Y	Y	0.07		MDL<=C, MDL=MEC	0.07	MEC<C, go to Step 5		Y	Y	0.5		N	No detected value of B, Step 7			
21	Carbon Tetrachloride	4.4	Y	Y	0.06		MDL<=C, MDL=MEC	0.06	MEC<C, go to Step 5		Y			0.06		B<C, Step 7			
22	Chlorobenzene	21000	Y	Y	0.06		MDL<=C, MDL=MEC	0.06	MEC<C, go to Step 5		Y	Y	0.5		N	No detected value of B, Step 7			
23	Chlorodibromomethane	34	Y	N		1.9		1.9	MEC<C, go to Step 5		Y	Y	0.05		N	No detected value of B, Step 7			
24	Chloroethane	No Criteria	Y	Y	0.07		No Criteria	0.07	No Criteria		Y	Y	0.5		N	No Criteria	No Criteria		Uo - No Criteria
25	2-Chloroethylvinyl ether	No Criteria	Y	Y	0.1		No Criteria	0.1	No Criteria		Y	Y	0.5		N	No Criteria	No Criteria		Uo - No Criteria
26	Chloroform	No Criteria	Y	N		61	No Criteria	61	No Criteria		Y	Y	0.5		N	No Criteria	No Criteria		Uo - No Criteria
27	Dichlorobromomethane	46	Y	N		17		17	MEC<C, go to Step 5		Y	Y	0.05		N	No detected value of B, Step 7			
28	1,1-Dichloroethane	No Criteria	Y	Y	0.05		No Criteria	0.05	No Criteria		Y	Y	0.05		N	No Criteria	No Criteria		Uo - No Criteria
29	1,2-Dichloroethane	99	Y	Y	0.06		MDL<=C, MDL=MEC	0.06	MEC<C, go to Step 5		Y			0.04		B<C, Step 7			
30	1,1-Dichloroethylene	3.2	Y	Y	0.06		MDL<=C, MDL=MEC	0.06	MEC<C, go to Step 5		Y	Y	0.5		N	No detected value of B, Step 7			
31	1,2-Dichloropropane	39	Y	Y	0.05		MDL<=C, MDL=MEC	0.05	MEC<C, go to Step 5		Y	Y	0.05		N	No detected value of B, Step 7			
32	1,3-Dichloropropylene	1700	Y	Y	0.06		MDL<=C, MDL=MEC	0.06	MEC<C, go to Step 5							No detected value of B, Step 7			
33	Ethylbenzene	29000	Y	Y	0.06		MDL<=C, MDL=MEC	0.06	MEC<C, go to Step 5		Y	Y	0.5		N	No detected value of B, Step 7			
34	Methyl Bromide	4000	Y	Y	0.05		MDL<=C, MDL=MEC	0.05	MEC<C, go to Step 5		Y	Y	0.5		N	No detected value of B, Step 7			
35	Methyl Chloride	No Criteria	Y	Y	0.04		No Criteria	0.04	No Criteria		Y	Y	0.5		N	No Criteria	No Criteria		Uo - No Criteria
36	Methylene Chloride	1600	Y	Y	0.07		MDL<=C, MDL=MEC	0.07	MEC<C, go to Step 5		Y			0.5		B<C, Step 7			
37	1,1,2,2-Tetrachloroethane	11	Y	Y	0.06		MDL<=C, MDL=MEC	0.06	MEC<C, go to Step 5		Y	Y	0.05		N	No detected value of B, Step 7			
38	Tetrachloroethylene	8.85	Y	Y	0.06		MDL<=C, MDL=MEC	0.06	MEC<C, go to Step 5		Y	Y	0.05		N	No detected value of B, Step 7			
39	Toluene	200000	Y	N		0.45		0.45	MEC<C, go to Step 5		Y	Y	0.3		N	No detected value of B, Step 7			
40	1,2-Trans-Dichloroethylene	140000	Y	Y	0.05		MDL<=C, MDL=MEC	0.05	MEC<C, go to Step 5		Y	Y	0.5		N	No detected value of B, Step 7			
41	1,1,1-Trichloroethane	No Criteria	Y	Y	0.06		No Criteria	0.06	No Criteria		Y	Y	0.5		N	No Criteria	No Criteria		Uo - No Criteria
42	1,1,2-Trichloroethane	42	Y	Y	0.07		MDL<=C, MDL=MEC	0.07	MEC<C, go to Step 5		Y	Y	0.05		N	No detected value of B, Step 7			
43	Trichloroethylene	81	Y	Y	0.06		MDL<=C, MDL=MEC	0.06	MEC<C, go to Step 5		Y	Y	0.5		N	No detected value of B, Step 7			
44	Vinyl Chloride	525	Y	Y	0.05		MDL<=C, MDL=MEC	0.05	MEC<C, go to Step 5		Y	Y	0.5		N	No detected value of B, Step 7			
45	2-Chlorophenol	400	Y	Y	0.4		MDL<=C, MDL=MEC	0.4	MEC<C, go to Step 5		Y	Y	1.2		N	No detected value of B, Step 7			
46	2,4-Dichlorophenol	790	Y	Y	0.3		MDL<=C, MDL=MEC	0.3	MEC<C, go to Step 5		Y	Y	1.3		N	No detected value of B, Step 7			
47	2,4-Dimethylphenol	2300	Y	Y	0.3		MDL<=C, MDL=MEC	0.3	MEC<C, go to Step 5		Y	Y	1.3		N	No detected value of B, Step 7			
48	2-Methyl- 4,6-Dinitrophenol	765	Y	Y	0.4		MDL<=C, MDL=MEC	0.4	MEC<C, go to Step 5		Y	Y	1.2		N	No detected value of B, Step 7			
49	2,4-Dinitrophenol	14000	Y	Y	0.3		MDL<=C, MDL=MEC	0.3	MEC<C, go to Step 5		Y	Y	0.7		N	No detected value of B, Step 7			
50	2-Nitrophenol	No Criteria	Y	Y	0.3		No Criteria	0.3	No Criteria		Y	Y	1.3		N	No Criteria	No Criteria		Uo - No Criteria
51	4-Nitrophenol	No Criteria	Y	Y	0.2		No Criteria	0.2	No Criteria		Y	Y	1.6		N	No Criteria	No Criteria		Uo - No Criteria
52	3-Methyl 4-Chlorophenol	No Criteria	Y	Y	0.3		No Criteria	0.3	No Criteria		Y	Y	1.1		N	No Criteria	No Criteria		Uo - No Criteria
53	Pentachlorophenol	7.9	Y	Y	0.4		MDL<=C, MDL=MEC	0.4	MEC<C, go to Step 5		Y	Y	1		N	No detected value of B, Step 7			
54	Phenol	4600000	Y	Y	0.2		MDL<=C, MDL=MEC	0.2	MEC<C, go to Step 5		Y	Y	1.3		N	No detected value of B, Step 7			
55	2,4,6-Trichlorophenol	6.5	Y	Y	0.2		All ND MDL<=C, MDL=MEC	0.2	MEC<C, go to Step 5		Y	Y	1.3		N	No detected value of B, Step 7			
56	Acenaphthene	2700	Y	Y	0.031		All ND MDL<=C, MDL=MEC	0.031	MEC<C, go to Step 5		Y			0.0015		B<C, Step 7			
57	Acenaphthylene	No Criteria	Y	Y	0.02		No Criteria	0.02	No Criteria		Y			0.00053		No Criteria	No Criteria		Uo - No Criteria
58	Anthracene	110000	Y	Y	0.031		All ND MDL<=C, MDL=MEC	0.031	MEC<C, go to Step 5		Y			0.0005		B<C, Step 7			
59	Benzidine	0.00054	Y	Y	0.3		MDL > C, Go to Step 5				Y	Y	0.0015		Y	No detected value of B, Step 7			
60	Benzo(a)Anthracene	0.049	Y	Y	0.02		MDL > C, Go to Step 5	0.02	MEC<C, go to Step 5		Y			0.0053		B<C, Step 7			
61	Benzo(a)Pyrene	0.049	Y	Y	0.02		MDL > C, Go to Step 5	0.02	MEC<C, go to Step 5		Y			0.00029		B<C, Step 7			
62	Benzo(b)Fluoranthene	0.049	Y	Y	0.031		MDL > C, Go to Step 5	0.031	MEC<C, go to Step 5		Y			0.0046		B<C, Step 7			
63	Benzo(ghi)Perylene	No Criteria	Y	Y	0.031		No Criteria	0.031	No Criteria		Y			0.0027		No Criteria	No Criteria		Uo - No Criteria
64	Benzo(k)Fluoranthene	0.049	Y	Y	0.041		MDL > C, Go to Step 5	0.041	MEC<C, go to Step 5		Y			0.0015		B<C, Step 7			
65	Bis(2-Chloroethoxy)Methane	No Criteria	Y	Y	0.3		No Criteria	0.3	No Criteria		Y	Y	0.3		N	No Criteria	No Criteria		Uo - No Criteria
66	Bis(2-Chloroethyl)Ether	1.4	Y	Y	0.3		All ND MDL<=C, MDL=MEC	0.3	MEC<C, go to Step 5		Y	Y	0.3		N	No detected value of B, Step 7			
67	Bis(2-Chloroisopropyl)Ether	170000	Y	Y	0.6		All ND MDL<=C, MDL=MEC	0.6	MEC<C, go to Step 5							No detected value of B, Step 7			
68	Bis(2-Ethylhexyl)Phthalate	5.9	Y	N		21		21	Y		Y	Y	0.5		N	No detected value of B, Step 7		Y	MEC => C [21.0 ug/l vs 5.90 ug/l]

Fact Sheet Appendix F-2(1)
C and H Sugar and CSD - Discharge Point 001
Reasonable Potential Analysis Results

Beginning			Step 2	Step 3					Step 4		Step 2	Step 3		Step 4.	Step 5.	Step 6.	Step 7 & 8.		
	Constituent name	C (µg/L) Lowest (most stringent) Criteria [a] (Enter "No Criteria" for no criteria)	Effluent Data Available?	Are all data points non-detects?	Minimum MDL (ug/L) if all data ND.	Enter the pollutant effluent detected max conc (ug/L)	If all data points are ND and MinDL>C, interim monitoring is required	Maximum Pollutant Concentration (MEC) (ug/L) (MEC= deteted max value; if all ND & MDL<C then MEC = MDL)	MEC vs. C Y if If MEC >= C, effluent limitation is required; 2. If MEC<C, go to Step 5		Background Data Available?	Are all background data points non-detects?	If all background data points ND Enter the min detection limit (MDL) (ug/L)	Enter the pollutant background detected max conc (ug/L)	If all B is ND, is MDL>C? (If Y, Go To Step 7)	B vs. C If B>C, effluent limitation is required	7) Review other information in the SIP page 4. Y if other information indicates limits are required. If information is unavailable or insufficient: 8) the RWQCB shall establish interim monitoring requirements.	RPA Result	Reason
69	4-Bromophenyl Phenyl Ether	No Criteria	Y	Y	0.4		No Criteria	0.4	No Criteria		Y	Y	0.23		N	No Criteria	No Criteria		Uo - No Criteria
70	Butylbenzyl Phthalate	5200	Y	Y	0.4		All ND MDL<=C, MDL=MEC	0.4	MEC<C, go to Step 5		Y	Y	0.52		N	No detected value of B, Step 7			
71	2-Chloronaphthalene	4300	Y	Y	0.3		All ND MDL<=C, MDL=MEC	0.3	MEC<C, go to Step 5		Y	Y	0.3		N	No detected value of B, Step 7			
72	4-Chlorophenyl Phenyl Ether	No Criteria	Y	Y	0.4		No Criteria	0.4	No Criteria		Y	Y	0.3		N	No Criteria	No Criteria		Uo - No Criteria
73	Chrysene	0.049	Y	Y	0.041		MDL > C, Go to Step 5	0.041	MEC<C, go to Step 5		Y			0.0024		B<C, Step 7			
74	Dibenzo(a,h)Anthracene	0.049	Y	Y	0.031		MDL > C, Go to Step 5	0.031	MEC<C, go to Step 5		Y			0.00064		B<C, Step 7			
75	1,2-Dichlorobenzene	17000	Y	Y	0.12		All ND MDL<=C, MDL=MEC	0.12	MEC<C, go to Step 5		Y	Y	0.8		N	No detected value of B, Step 7			
76	1,3-Dichlorobenzene	2600	Y	Y	0.16		All ND MDL<=C, MDL=MEC	0.16	MEC<C, go to Step 5		Y	Y	0.8		N	No detected value of B, Step 7			
77	1,4-Dichlorobenzene	2600	Y	Y	0.12		All ND MDL<=C, MDL=MEC	0.12	MEC<C, go to Step 5		Y	Y	0.8		N	No detected value of B, Step 7			
78	3,3 Dichlorobenzidine	0.077	Y	Y	0.3		MDL > C, Go to Step 5				Y	Y	0.001		N	No detected value of B, Step 7			
79	Diethyl Phthalate	120000	Y	Y	0.4		All ND MDL<=C, MDL=MEC	0.4	MEC<C, go to Step 5		Y	Y	0.24		N	No detected value of B, Step 7			
80	Dimethyl Phthalate	2900000	Y	Y	0.4		All ND MDL<=C, MDL=MEC	0.4	MEC<C, go to Step 5		Y	Y	0.24		N	No detected value of B, Step 7			
81	Di-n-Butyl Phthalate	12000	Y	Y	0.4		All ND MDL<=C, MDL=MEC	0.4	MEC<C, go to Step 5		Y	Y	0.5		N	No detected value of B, Step 7			
82	2,4-Dinitrotoluene	9.1	Y	Y	0.3		All ND MDL<=C, MDL=MEC	0.3	MEC<C, go to Step 5		Y	Y	0.27		N	No detected value of B, Step 7			
83	2,6-Dinitrotoluene	No Criteria	Y	Y	0.3		No Criteria	0.3	No Criteria		Y	Y	0.29		N	No Criteria	No Criteria		Uo - No Criteria
84	Di-n-Octyl Phthalate	No Criteria	Y	Y	0.4		No Criteria	0.4	No Criteria		Y	Y	0.38		N	No Criteria	No Criteria		Uo - No Criteria
85	1,2-Diphenylhydrazine	0.54	Y	Y	0.3		All ND MDL<=C, MDL=MEC	0.3	MEC<C, go to Step 5		Y			0.0037		B<C, Step 7			
86	Fluoranthene	370	Y	Y	0.03		All ND MDL<=C, MDL=MEC	0.03	MEC<C, go to Step 5		Y			0.011		B<C, Step 7			
87	Fluorene	14000	Y	Y	0.02		All ND MDL<=C, MDL=MEC	0.02	MEC<C, go to Step 5		Y			0.00208		B<C, Step 7			
88	Hexachlorobenzene	0.00077	Y	Y	0.4		MDL > C, Go to Step 5				Y			0.0000202		B<C, Step 7			
89	Hexachlorobutadiene	50	Y	Y	0.2		All ND MDL<=C, MDL=MEC	0.2	MEC<C, go to Step 5		Y	Y	0.3		N	No detected value of B, Step 7			
90	Hexachlorocyclopentadiene	17000	Y	Y	0.1		All ND MDL<=C, MDL=MEC	0.1	MEC<C, go to Step 5		Y	Y	0.31		N	No detected value of B, Step 7			
91	Hexachloroethane	8.9	Y	Y	0.2		All ND MDL<=C, MDL=MEC	0.2	MEC<C, go to Step 5		Y	Y	0.2		N	No detected value of B, Step 7			
92	Indeno(1,2,3-cd)Pyrene	0.049	Y	Y	0.031		MDL > C, Go to Step 5	0.031	MEC<C, go to Step 5		Y			0.004		B<C, Step 7			
93	Isophorone	600	Y	Y	0.3		All ND MDL<=C, MDL=MEC	0.3	MEC<C, go to Step 5		Y	Y	0.3		N	No detected value of B, Step 7			
94	Naphthalene	No Criteria	Y	Y	0.02		No Criteria	0.02	No Criteria		Y			0.0023		No Criteria	No Criteria		Uo - No Criteria
95	Nitrobenzene	1900	Y	Y	0.3		All ND MDL<=C, MDL=MEC	0.3	MEC<C, go to Step 5		Y	Y	0.25		N	No detected value of B, Step 7			
96	N-Nitrosodimethylamine	8.1	Y	Y	0.4		All ND MDL<=C, MDL=MEC	0.4	MEC<C, go to Step 5		Y	Y	0.3		N	No detected value of B, Step 7			
97	N-Nitrosodi-n-Propylamine	1.4	Y	Y	0.3		All ND MDL<=C, MDL=MEC	0.3	MEC<C, go to Step 5		Y	Y	0.001		N	No detected value of B, Step 7			
98	N-Nitrosodiphenylamine	16	Y	Y	0.4		All ND MDL<=C, MDL=MEC	0.4	MEC<C, go to Step 5		Y	Y	0.001		N	No detected value of B, Step 7			
99	Phenanthrene	No Criteria	Y	Y	0.03		No Criteria	0.03	No Criteria		Y			0.0061		No Criteria	No Criteria		Uo - No Criteria
100	Pyrene	11000	Y	Y	0.03		All ND MDL<=C, MDL=MEC	0.03	MEC<C, go to Step 5		Y			0.0051		B<C, Step 7			
101	1,2,4-Trichlorobenzene	No Criteria	Y	Y	0.3		No Criteria	0.3	No Criteria		Y	Y	0.3		N	No Criteria	No Criteria		Uo - No Criteria
102	Aldrin	0.00014	Y	Y	0.003		MDL > C, Go to Step 5									No detected value of B, Step 7			
103	alpha-BHC	0.013	Y	Y	0.002		All ND MDL<=C, MDL=MEC	0.002	MEC<C, go to Step 5		Y			0.000496		B<C, Step 7			
104	beta-BHC	0.046	Y	Y	0.001		All ND MDL<=C, MDL=MEC	0.001	MEC<C, go to Step 5		Y			0.000413		B<C, Step 7			
105	gamma-BHC	0.063	Y	Y	0.001		All ND MDL<=C, MDL=MEC	0.001	MEC<C, go to Step 5		Y			0.0007034		B<C, Step 7			
106	delta-BHC	No Criteria	Y	Y	0.001		No Criteria	0.001	No Criteria		Y			0.000042		No Criteria	No Criteria		Uo - No Criteria
107	Chlordane (303d listed)	0.00059	Y	Y	0.005		MDL > C, Go to Step 5				Y			0.00018		B<C, Step 7			
108	4,4'-DDT (303d listed)	0.00059	Y	Y	0.001		MDL > C, Go to Step 5				Y			0.000066		B<C, Step 7			
109	4,4'-DDE	0.00059	Y	Y	0.001		MDL > C, Go to Step 5				Y			0.000693					
110	4,4'-DDD	0.00084	Y	Y	0.001		MDL > C, Go to Step 5				Y			0.000313		B<C, Step 7			
111	Dieldrin (303d listed)	0.00014	Y	Y	0.002		MDL > C, Go to Step 5				Y			0.000264					
112	alpha-Endosulfan	0.0087	Y	Y	0.002		All ND MDL<=C, MDL=MEC	0.002	MEC<C, go to Step 5		Y			0.000031		B<C, Step 7			
113	beta-Endolsulfan	0.0087	Y	Y	0.001		All ND MDL<=C, MDL=MEC	0.001	MEC<C, go to Step 5		Y			0.000069		B<C, Step 7			
114	Endosulfan Sulfate	240	Y	Y	0.001		All ND MDL<=C, MDL=MEC	0.001	MEC<C, go to Step 5		Y			0.0000819		B<C, Step 7			
115	Endrin	0.0023	Y	Y	0.002		All ND MDL<=C, MDL=MEC	0.002	MEC<C, go to Step 5		Y			0.000036		B<C, Step 7			
116	Endrin Aldehyde	0.81	Y	Y	0.002		All ND MDL<=C, MDL=MEC	0.002	MEC<C, go to Step 5							No detected value of B, Step 7			
117	Heptachlor	0.00021	Y	Y	0.003		MDL > C, Go to Step 5				Y			0.000019		B<C, Step 7			
118	Heptachlor Epoxide	0.00011	Y	Y	0.002		MDL > C, Go to Step 5				Y			0.00002458		B<C, Step 7			
119-125	PCBs sum (303d listed)	0.00017	Y	Y	0.031		MDL > C, Go to Step 5									No detected value of B, Step 7			
126	Toxaphene	0.0002	Y	Y	0.15		MDL > C, Go to Step 5									No detected value of B, Step 7			
	Tributylin	0.0074	Y	Y	0.00044		All ND MDL<=C, MDL=MEC	0.00044	MEC<C, go to Step 5		Y	Y	0.001		N	No detected value of B, Step 7			
	Total PAHs	15	Y	Y	0.02		All ND MDL<=C, MDL=MEC	0.02	MEC<C, go to Step 5		Y			0.26		B<C, Step 7			

a. The most stringent of salt and fresh water criteria were selected for this analysis.

b. According to Table 1 of Section (b)(1) of CTR (40CFR 131.38), those criteria should use Basin Plan objectives; criteria for Se and CN are specified by the NTR.

c. Acronyms in the "Final Result" column:

Ud: Cannot determine reasonable potential due to the absence of data, or because Minimum DL is greater than water quality objective or CTR criteria

Uo: No criteria available

IM: Interim monitoring is required

Appendix F-2(2)
Reasonable Potential Analysis Results for
Discharge Point 002

Fact Sheet Appendix F-2(2)
C and H Sugar and CSD - Discharge Point 002
Reasonable Potential Analysis Results

		C (µg/L)					Ambient Background				
	Constituent name	Lowest (most stringent) Criteria [(a)] (Enter "No Criteria" for no criteria)	Effluent Data Available?	Are all data points non-detects?	Minimum MDL (ug/L) if all data ND.	Enter the pollutant effluent detected max conc (ug/L)	Ambient background - If all data points ND Enter the min detection limit (MDL) (ug/L)	Ambient background - If all data points ND Enter the min detection limit (MDL) (ug/L)	7) Review other information in the SIP page 4. Y if other information indicates limits are required. If information is unavailable or insufficient: 8) the RWQCB shall establish interim monitoring requirements.	RPA Result	Reason
A	B	C	D	E	F	G	N	O	r	S	T
1	Antimony	4300	Y	N		0.7		1.8			
2	Arsenic [b]	36	Y	N		1.7		2.46			
3	Beryllium	No Criteria	Y	Y	0.06			0.215	No Criteria		Uo - No Criteria
4	Cadmium [b]	0.637415878	Y			0.2		0.1268			
5a	Chromium (III)	113.4671795	Y	N		9.8					
5b	Chromium (VI) [b]	11.43451143	Y	Y	0.9			4.4			
6	Copper	7.164	Y	N		13		2.55		Y	MEC => C [13.000 ug/l vs 7.164 ug/l]
7	Lead [b]	1.249869176	Y	N		2.8		0.8		Y	MEC => C [2.800 ug/l vs 1.250 ug/l]
8	Mercury (303d listed) [b]	0.025	Y	N		0.98		0.0086		Y	MEC => C [0.980 ug/l vs 0.025 ug/l]
9	Nickel [b]	30.37037037	Y	N		13		3.7			
10	Selenium (303d listed) [b]	5	Y	N		2		0.39			
11	Silver [b]	1.148510332	Y	N		0.2		0.0516			
12	Thallium	6.3	Y	N		0.095		0.21			
13	Zinc [b]	64.33273609	Y	N		30		5.1			
14	Cyanide [b]	1	Y	N		19	0.4			Y	MEC => C [19.000 ug/l vs 1.000 ug/l]
15	Asbestos	No Criteria	N						No Criteria		Uo - No Criteria
16	2,3,7,8-TCDD (Dioxin) (303d listed)	0.000000014	Y	Y	0.000000637		0.0000003500				Effluent MDL > C, Interim Monitor
16-TEQ	2,3,7,8-TCDD TEQ (303d listed)	0.000000014	Y	Y	0.000000637		0.000000001				Effluent MDL > C, Interim Monitor
17	Acrolein	780	Y	Y	1		0.5				
18	Acrylonitrile	0.66	Y	Y	1			0.03			Effluent MDL > C, Interim Monitor
19	Benzene	71	Y	Y	0.27		0.05				
20	Bromoform	360	Y	N		0.9	0.5				
21	Carbon Tetrachloride	4.4	Y	Y	0.42			0.06			
22	Chlorobenzene	21000	Y	Y	0.19		0.5				
23	Chlorodibromomethane	34	Y	N		16	0.05				
24	Chloroethane	No Criteria	Y	Y	0.34		0.5		No Criteria		Uo - No Criteria
25	2-Chloroethylvinyl ether	No Criteria	Y	Y	0.31		0.5		No Criteria		Uo - No Criteria
26	Chloroform	No Criteria	Y	N		210	0.5		No Criteria		Uo - No Criteria
27	Dichlorobromomethane	46	Y	N		28	0.05				
28	1,1-Dichloroethane	No Criteria	Y	Y	0.28		0.05		No Criteria		Uo - No Criteria
29	1,2-Dichloroethane	99	Y	Y	0.18			0.04			
30	1,1-Dichloroethylene	3.2	Y	Y	0.37		0.5				
31	1,2-Dichloropropane	39	Y	Y	0.2		0.05				
32	1,3-Dichloropropylene	1700	Y	Y	0.2						
33	Ethylbenzene	29000	Y	Y	0.3		0.5				
34	Methyl Bromide	4000	Y	Y	0.42		0.5				
35	Methyl Chloride	No Criteria	Y	N		1	0.5		No Criteria		Uo - No Criteria
36	Methylene Chloride	1600	Y	Y	0.38			0.5			
37	1,1,2,2-Tetrachloroethane	11	Y	Y	0.3		0.05				
38	Tetrachloroethylene	8.85	Y	Y	0.32		0.05				
39	Toluene	200000	Y	Y	0.25		0.3				
40	1,2-Trans-Dichloroethylene	140000	Y	Y	0.3		0.5				
41	1,1,1-Trichloroethane	No Criteria	Y	Y	0.35		0.5		No Criteria		Uo - No Criteria
42	1,1,2-Trichloroethane	42	Y	Y	0.27		0.05				
43	Trichloroethylene	81	Y	Y	0.29		0.5				
44	Vinyl Chloride	525	Y	Y	0.34		0.5				
45	2-Chlorophenol	400	Y	Y	0.4		1.2				
46	2,4-Dichlorophenol	790	Y	Y	0.3		1.3				
47	2,4-Dimethylphenol	2300	Y	Y	0.3		1.3				
48	2-Methyl- 4,6-Dinitrophenol	765	Y	Y	0.4		1.2				
49	2,4-Dinitrophenol	14000	Y	Y	0.3		0.7				
50	2-Nitrophenol	No Criteria	Y	Y	0.3		1.3		No Criteria		Uo - No Criteria
51	4-Nitrophenol	No Criteria	Y	Y	0.2		1.6		No Criteria		Uo - No Criteria
52	3-Methyl 4-Chlorophenol	No Criteria	Y	Y	0.3		1.1		No Criteria		Uo - No Criteria
53	Pentachlorophenol	7.9	Y	Y	0.4		1				
54	Phenol	4600000	Y	N		6	1.3				
55	2,4,6-Trichlorophenol	6.5	Y	Y	0.2		1.3				
56	Acenaphthene	2700	Y	Y	0.17			0.0019			
57	Acenaphthylene	No Criteria	Y	Y	0.03			0.00053	No Criteria		Uo - No Criteria
58	Anthracene	110000	Y	Y	0.16			0.0005			
59	Benzidine	0.00054	Y	Y	0.3		0.0015				
60	Benzo(a)Anthracene	0.049	Y	Y	0.12			0.0053			
61	Benzo(a)Pyrene	0.049	Y	Y	0.09			0.00029			
62	Benzo(b)Fluoranthene	0.049	Y	Y	0.11			0.0046			
63	Benzo(ghi)Perylene	No Criteria	Y	Y	0.06			0.0027	No Criteria		Uo - No Criteria
64	Benzo(k)Fluoranthene	0.049	Y	Y	0.16			0.0015			
65	Bis(2-Chloroethoxy)Methane	No Criteria	Y	Y	0.3		0.3		No Criteria		Uo - No Criteria
66	Bis(2-Chloroethyl)Ether	1.4	Y	Y	0.3		0.3				
67	Bis(2-Chloroisopropyl)Ether	170000	Y	Y	0.6						

Fact Sheet Appendix F-2(2)
C and H Sugar and CSD - Discharge Point 002
Reasonable Potential Analysis Results

	Constituent name	C (µg/L) Lowest (most stringent) Criteria [a] (Enter "No Criteria" for no criteria)	Effluent Data Available?	Are all data points non-detects?	Minimum MDL (ug/L) if all data ND.	Enter the pollutant effluent detected max conc (ug/L)	Ambient Background: Ambient background - If all data points ND Enter the min detection limit (MDL) (ug/L)	Ambient Background: Ambient background - If all data points ND Enter the min detection limit (MDL) (ug/L)	7) Review other information in the SIP page 4. Y if other information indicates limits are required. If information is unavailable or insufficient: 8) the RWQCB shall establish interim monitoring requirements.	RPA Result	Reason
68	**Bis(2-Ethylhexyl)Phthalate**	5.9	Y	N		17	0.5			Y	**MEC => C [17.0 ug/l vs 5.9 ug/l]**
69	4-Bromophenyl Phenyl Ether	No Criteria	Y	Y	0.4		0.23		No Criteria		**Uo - No Criteria**
70	Butylbenzyl Phthalate	5200	Y	Y	0.4		0.52				
71	2-Chloronaphthalene	4300	Y	Y	0.3		0.3				
72	4-Chlorophenyl Phenyl Ether	No Criteria	Y	Y	0.4		0.3		No Criteria		**Uo - No Criteria**
73	Chrysene	0.049	Y	Y	0.14			0.0024			
74	Dibenzo(a,h)Anthracene	0.049	Y	Y	0.04			0.00064			
75	1,2-Dichlorobenzene	17000	Y	Y	0.112		0.8				
76	1,3-Dichlorobenzene	2600	Y	Y	0.16		0.8				
77	1,4-Dichlorobenzene	2600	Y	Y	0.3		0.8				
78	3,3 Dichlorobenzidine	0.077	Y	Y	0.3		0.001				
79	Diethyl Phthalate	120000	Y	Y	0.4		0.24				
80	Dimethyl Phthalate	2900000	Y	Y	0.4		0.24				
81	Di-n-Butyl Phthalate	12000	Y	Y	0.4		0.5				
82	2,4-Dinitrotoluene	9.1	Y	Y	0.3		0.27				
83	2,6-Dinitrotoluene	No Criteria	Y	Y	0.3		0.29		No Criteria		**Uo - No Criteria**
84	Di-n-Octyl Phthalate	No Criteria	Y	Y	0.4		0.38		No Criteria		**Uo - No Criteria**
85	1,2-Diphenylhydrazine	0.54	Y	Y	0.3			0.0037			
86	Fluoranthene	370	Y	Y	0.03			0.011			
87	Fluorene	14000	Y	Y	0.02			0.00208			
88	Hexachlorobenzene	0.00077	Y	Y	0.4			0.0000202			
89	Hexachlorobutadiene	50	Y	Y	0.2		0.3				
90	Hexachlorocyclopentadiene	17000	Y	Y	0.1		0.31				
91	Hexachloroethane	8.9	Y	Y	0.2		0.2				
92	Indeno(1,2,3-cd)Pyrene	0.049	Y	Y	0.04			0.004			
93	Isophorone	600	Y	Y	0.3		0.3				
94	Naphthalene	No Criteria	Y	Y	0.05			0.0023	No Criteria		**Uo - No Criteria**
95	Nitrobenzene	1900	Y	Y	0.3		0.25				
96	N-Nitrosodimethylamine	8.1	Y	Y	0.4		0.3				
97	N-Nitrosodi-n-Propylamine	1.4	Y	Y	0.3		0.001				
98	N-Nitrosodiphenylamine	16	Y	Y	0.4		0.001				
99	Phenanthrene	No Criteria	Y	Y	0.03			0.0061	No Criteria		**Uo - No Criteria**
100	Pyrene	11000	Y	Y	0.03			0.0051			
101	1,2,4-Trichlorobenzene	No Criteria	Y	Y	0.3		0.3		No Criteria		**Uo - No Criteria**
102	Aldrin	0.00014	Y	Y	0.003						
103	alpha-BHC	0.013	Y	Y	0.002			0.000496			
104	beta-BHC	0.046	Y	Y	0.001			0.000413			
105	gamma-BHC	0.063	Y	Y	0.001			0.0007034			
106	delta-BHC	No Criteria	Y	Y	0.001			0.000042	No Criteria		**Uo - No Criteria**
107	Chlordane (303d listed)	0.00059	Y	Y	0.005			0.00018			
108	4,4'-DDT (303d listed)	0.00059	Y	Y	0.001			0.000066			
109	4,4'-DDE	0.00059	Y	Y	0.001			0.000693			
110	4,4'-DDD	0.00084	Y	Y	0.001			0.000313			
111	Dieldrin (303d listed)	0.00014	Y	Y	0.002			0.000264			
112	alpha-Endosulfan	0.0087	Y	Y	0.002			0.000031			
113	beta-Endolsulfan	0.0087	Y	Y	0.001			0.000069			
114	Endosulfan Sulfate	240	Y	Y	0.001			0.0000819			
115	Endrin	0.0023	Y	Y	0.002			0.000036			
116	Endrin Aldehyde	0.81	Y	Y	0.002						
117	Heptachlor	0.00021	Y	Y	0.003			0.000019			
118	Heptachlor Epoxide	0.00011	Y	Y	0.002			0.00002458			
119-125	PCBs sum (303d listed)	0.00017	Y	Y	0.03						
126	Toxaphene	0.0002	Y	Y	0.2						
	Tributylin	0.0074	Y	Y	0.000465		0.001				
	Total PAHs	15	Y	Y	0.02			0.26			

a. The most stringent of salt and fresh water criteria were selected for this analysis.

b. According to Table 1 of Section (b)(1) of CTR (40CFR 131.38), those criteria should use Basin Plan objectives; criteria for Se and CN are specified by the NTR.

c. Acronyms in the "Final Result" column:

Ud: Cannot determine reasonable potential due to the absence of data, or because Minimum DL is greater than water quality objective or CTR criteria

Uo: No criteria available

IM: Interim monitoring is required

Appendix F-3(1)
Calculation of Final WQBELs for Discharge Point 001

Fact Sheet Appendix F-3 (1)
C and H Sugar and CSD - Discharge Point 001
WQBEL Calculations

PRIORITY POLLUTANTS	**Arsenic**	**Copper**	**Copper alternate**	**Lead**	**Mercury**	**Nickel**	**Selenium**	**Zinc**	**Cyanide**	**Cynide alternate**	**Dioxin TEQ**	**Bis(2-Ethylhexyl) Phthalate**
Units	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Basis and Criteria type	BP SW Aq Life	CTR SW Aq Life	Copper SSO	BP FW Aq Life	BP FW Aq Life	BP SW Aq Life	NTR Criterion for the Bay	BP FW Aq Life	NTR Criterion for the Bay	BP, SSO	BP narrative	CTR HH
Chronic Dissolved WQO		3.1	6.0									
Acute Dissolved WQO	36	4.8	9.4	1.2	0.025	30	5	64	1	2.9	1.40E-08	5.9
Chronic Translator		0.38	0.38									
Acute Translator		0.67	0.67									
Water Effect Ratio		2.40	---									
Dilution Factor (D) (if applicable)	9	9	9	9	0	9	0	9	9	9	0	9
No. of samples per month	4	4	4	4	4	4	4	4	4	4	4	4
Aquatic life criteria analysis required? (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
HH criteria analysis required? (Y/N)	N	N	N	N	Y	Y	N	N	Y	Y	Y	Y
Applicable Acute WQO	69	17	14	32	2.4	130	20	64	1	9.4		
Applicable Chronic WQO	36	20	16	1.2	0.025	30	5	64	1	2.9		
HH criteria					0.051	4,600			220,000	220,000	1.40E-08	5.9
Background (max conc for Aq Life calc)	2.46	2.55	2.55	0.804	0.0086	3.73	0.39	5.1	0.4	0.4	7.10E-08	0.67
Background (avg conc for HH calc)					0.00384	2.3			0.40	0.40	3.17E-08	0.55
Is the pollutant Bioaccumulative(Y/N)? (e.g., Hg)	N	N	N	N	Y	N	Y	N	N	N	Y	N
ECA acute	667.9	147.1	117.3	312.8	2.4	1266.4	20.0	594.1	6.4	90.4		
ECA chronic	337.9	177.1	134.9	4.8	0.0	266.4	5.0	594.1	6.4	25.4		
ECA HH					0.051	45979.3			2199996.4	2199996.4	1.40E-08	54.05
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	N	N	N	N	N	N	N	N	Y	Y	Y	Y
Avg of effluent data points	25.469	10.172	10.172	0.755	0.019	28.844	8.384	77.688				
Std Dev of effluent data points	11.115	3.280	3.280	0.572	0.018	27.525	6.171	66.534				
CV calculated	0.44	0.32	0.32	0.76	0.97	0.95	0.74	0.86	N/A	N/A	N/A	N/A
CV (Selected) - Final	0.44	0.32	0.32	0.76	0.97	0.95	0.74	0.86	0.60	0.60	0.60	0.60
ECA acute mult99	0.41	0.51	0.51	0.26	0.21	0.21	0.27	0.23	0.32	0.32		
ECA chronic mult99	0.62	0.70	0.70	0.46	0.38	0.39	0.47	0.42	0.53	0.53		
LTA acute	275.90	74.34	59.33	81.94	0.50	269.37	5.37	139.34	2.05	29.03		
LTA chronic	209.39	123.55	94.17	2.17	0.01	102.95	2.33	248.84	3.38	13.40		
minimum of LTAs	209.39	74.34	59.33	2.17	0.01	102.95	2.33	139.34	2.05	13.40		
AMEL mult95	1.39	1.28	1.28	1.71	1.92	1.90	1.69	1.81	1.55	1.55	1.55	1.55
MDEL mult99	2.42	1.98	1.98	3.82	4.78	4.70	3.72	4.26	3.11	3.11	3.11	3.11
AMEL (aq life)	291.71	95.52	76.23	3.71	0.02	195.72	3.92	251.57	3.19	20.80		
MDEL(aq life)	506.87	147.05	117.35	8.30	0.05	484.01	8.65	594.10	6.40	41.72		
MDEL/AMEL Multiplier	1.74	1.54	1.54	2.24	2.49	2.47	2.21	2.36	2.01	2.01	2.01	2.01
AMEL (human hlth)					0.051	45979			2199996	2199996	1.40E-08	54.05
MDEL (human hlth)					0.127	113704			4413609	4413609	2.81E-08	108.43
minimum of AMEL for Aq. life vs HH	292	96	76	3.71	0.02	195.72	3.92	252	3.19	21	1.40E-08	54
minimum of MDEL for Aq. Life vs HH	507	147	117	8.30	0.05	484.01	8.65	594	6.40	42	2.81E-08	108
Current limit in permit (30-day average)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Current limit in permit (daily)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Final limit - AMEL	290	96	76	3.7	0.018	200	3.9	250	3.2	21	1.40E-08	54
Final limit - MDEL	510	150	120	8.3	0.046	480	8.7	590	6.4	42	2.81E-08	110
Max Effl Conc (MEC)	45	20	20	2.6	0.082	160	26	220	4	4	5.62E-08	21
Feasibility to comply?	Yes	Yes	Yes	Yes	**No**	Yes	**No**	Yes	**No**	Yes	Yes	Yes
Interim limits if infeasibility is demonstrated	NA	NA	NA	NA	0.16	NA	26	NA	5 (1)	NA	NA	NA
interim limits expressed as					Daily maximum		Daily maximum		Daily maximum			
Basis for inteirm limits					99.87th percentile		99.87th percentile		SIP Minimum level			

Appendix F-3(2)
Calculation of Final WQBELs for Discharge Point 002

Fact Sheet Appendix F-3(2)
C and H Sugar and CSD- Discharge Point 002
Water Quality Based Effluent Limits

PRIORITY POLLUTANTS	Copper	Copper (2)	Lead	Mercury	Cyanide	Cyanide	Dioxin-TEQ	Bis(2-Ethylhexyl) Phthalate
Units	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Basis and Criteria type	CTR, SW	Copper SSO	BP, FW	BP, FW	NTR	BP, SSO	BP, narrative	CTR, HH
Chronic WQO	3.1	6.0	1.2	0.025	1.00	2.90	1.40E-08	5.90
Acute WQO	4.8	9.4						
Chronic Translator	0.38	0.38						
Acute Translator	0.67	0.67						
WER	2.40	---						
Dilution Factor (D) (if applicable)	9	9	9	0	9	9	0	9
No. of samples per month	4	4	4	4	4	4	4	4
Aquatic life criteria analysis required? (Y/N)	Y	Y	Y	Y	Y	Y	N	N
HH criteria analysis required? (Y/N)	N	N	N	Y	N	Y	Y	Y
Applicable Acute WQO	17	14	32	2.40	1.00	9.40	-----	-----
Applicable Chronic WQO	20	16	1.2	0.025	1.00	2.90	-----	-----
HH criteria	-----		-----	0.051	220,000	220,000	1.40E-08	5.90
Background (Max conc for Aquatic Life calc)	2.55	2.55	0.804	0.0086	0.4	0.4	7.10E-08	0.67
Background (Average conc for Human Health calc)	-----		-----	0.00384	0.4	0.4	3.17E-08	0.55
Is the pollutant Bioaccumulative(Y/N)? (e.g., Hg)	N	N	N	Y	N	N	Y	N
ECA acute	147.1	117.1	313.5	2.4	6.4	90.4		
ECA chronic	177.1	137.1	5.3	0.025	6.4	25.4		
ECA HH				0.051			1.40E-08	54.05
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	N	N	N	N	N	N	Y	Y
Avg of effluent data points	4.070	4.106	0.381	0.036	6.770	6.770	-----	-----
Std Dev of effluent data points	1.630	1.626	0.478	0.113	4.806	4.806	-----	-----
CV calculated	0.40	0.40	1.25	3.11	0.71	0.71	N/A	N/A
CV (Selected) - Final	0.40	0.40	1.25	3.11	0.71	0.71	0.60	0.60
ECA acute mult99	0.44	0.44	0.17	0.09	0.28	0.28		
ECA chronic mult99	0.64	0.65	0.31	0.14	0.48	0.48		
LTA acute	64.59	51.81	52.41	0.22	1.78	25.09		
LTA chronic	113.85	88.53	1.63	0.0035	3.05	12.10		
minimum of LTAs	64.59	51.81	1.63	0.0035	1.78	12.10		
AMEL mult95	1.36	1.35	2.18	3.35	1.66	1.66	1.55	1.55
MDEL mult99	2.28	2.26	5.98	10.98	3.60	3.60	3.11	3.11
AMEL (aq life)	87.76	70.17	3.56	0.0117	2.95	20.09		
MDEL(aq life)	147.05	117.05	9.73	0.0385	6.40	43.58		
MDEL/AMEL Multiplier	1.68	1.67	2.74	3.27	2.17	2.17	2.01	2.01
AMEL (human hlth)				0.051			1.40E-08	54.050
MDEL (human hlth)				0.16701			2.81E-08	108.43452
minimum of AMEL for Aq. life vs HH	88	70	3.6	0.012	2.9	20	1.40E-08	54
minimum of MDEL for Aq. Life vs HH	147	117	9.7	0.038	6.4	44	2.81E-08	108
Current limit in permit (30-d avg)	-----		-----	0.21	-----	-----	-----	-----
Current limit in permit (daily)	37		50.3	1	-----	-----	-----	-----
Final limit - AMEL	88	70	3.6	0.012	2.9	20	1.40E-08	54
Final limit - MDEL	150	120	9.7	0.038	6.4	44	2.81E-08	110
Max Effl Conc (MEC)	13	13	2.8	0.98	19	19	7.73E-10	17
Feasibility to comply?	**Yes**	**Yes**	**Yes**	**No**	**No**	---	**No**	**Yes**
Interim Limit				1 / 0.21	22.8		NA	
Interim limits expressed as				Daily max/ monthly avg	Daily max			
Basis for inteirm limits				Previous permit limits	99.87th percentile			

Appendix F-4
General Basis for Final Compliance Dates [1]
for Discharges North of the Dumbarton Bridge
Revised March 23, 2006

Constituent	Reference for applicable standard	Maximum compliance schedule allowed	Compliance date and Basis
Cyanide Selenium	NTR	10 years	**10-yr, but no later than April 28, 2010** (10 years from effective date of SIP). Basis is the Basin Plan, see note [2].
Copper (salt)	CTR	5 years	**5-yr, but no later than May 18, 2010.** Bases are CTR and SIP. See note [4]
Mercury PAH EPA 610	Numeric Basin Plan (BP)	10 years	**10-yr, but no later than April 28, 2010,** which is 10 years from effective date of SIP (April 28, 2000). Basis is the Basin Plan, See note [2a].
Arsenic Cadmium Chromium (VI) Copper (fresh) Lead Nickel Silver (CMC) Zinc	Numeric BP	10 years	**10-yr, but no later than January 1, 2015.** This is 10 years (using full months) from effective date of 2004 BP amendment (January 5, 2005). Basis is the Basin Plan section 4.3.5.6. See note [2b]. Also, see note [3] for permits issued prior to effective date of 2004 BP amendment.
Dioxins/Furans Tributyltin Other toxic pollutants not in CTR	Narrative BP using SIP methodology	10 years	**10-yr from effective date of permit** (which is when new standard is adopted; no sunset date). Basis is the Basin Plan, see note [2c].
Other priority pollutants on CTR and not listed above	CTR	5 years	**5-yr, but no later than May 18, 2010** (this is 10 years from effective date of CTR/SIP). Basis is the CTR and SIP. See note [4]

[1] These dates are maximum allowable compliance dates applicable. As required by the Basin Plan, CTR, SIP, and 40CFR122.47, compliance should be as short as possible. These are only applicable for discharges north of the Dumbarton Bridge because applicable criteria for the south bay are different than those cited above.

a. For pollutants where there are planned TMDLs or SSOs, and final WQBELs may be affected by those TMDLs and SSOs, maximum timeframes may be appropriate due the uncertain length of time it takes to develop the TMDL/SSO.

b. However, for pollutants without planned TMDLs or SSOs, the State Board in the EBMUD remand order (WQO 2002-0012), directs the Regional Board to establish schedules that are as short as feasible in accordance with requirements.

[2] The Basin Plan provides for a 10-year compliance schedule for implementation of measures to comply with new standards as of the effective date of those standards. This provision has been construed to authorize compliance schedules for new interpretations of existing standards, such as the numeric and narrative water quality objectives specified in the Basin Plan, if the new interpretations result in more stringent limits than in the previous permit.

c. For the numeric standards and objectives in place prior to the SIP (these include the 1995 Basin Plan objectives, and NTR criteria that were implemented in accordance with the Basin Plan), due to the adoption of the SIP, the Water Board has newly interpreted these objectives and standards. The effective date of this new interpretation is the effective date of the SIP (April 28, 2000) for implementation of these numeric Basin Plan objectives.

d. For numeric objectives for the seven pollutants adopted in the 2004 Basin Plan (amendments), the Water Board has newly adopted these objectives. The effective date of these new objectives is the approval date of the 2004 Basin Plan by U.S. EPA (January 5, 2005) for implementation of these numeric Basin Plan objectives. December is the last full month directly preceding the sunset date. Compliance should be set on the first day of the month to ease determination of monthly average limits. Therefore, compliance must begin on January 1, 2015.

e. For narrative objectives, the Board must newly interpreted these objectives using best professional judgment as defined in the Basin Plan for each permit. Therefore, the effective date of this new interpretation will be the effective date of the permit.

[3] The schedules established in permits effective prior to the 2004 Basin Plan (amendments) should be continued into subsequent permits reissued after the 2004 Basin Plan. For example, Permit XX, adopted Nov 2004 became effective Feb 1, 2005. Permit XX establishes a compliance schedule for copper to end April 1, 2010. When next reissued in 2010, the compliance deadline for the same copper limit should remain April 1, 2010. However, if in applying the 2004 BP objective results in a more stringent limit for copper, then a new compliance schedule may extend to the new date in 2015, provided discharger XX justifies the need for the longer compliance schedule.

[4] Permits effective after SIP/CTR that specified 5-yr compliance schedules pursuant to SIP §2.1for CTR pollutants do not qualify for another compliance schedule for those same CTR pollutants during reissuance.

a. An exception to this would be if new data collected during the term of the permit results in more stringent limitations, then a compliance schedule may be allowable for the more stringent limits up to May 18, 2010.

b. Another exception applies to pollutants granted a compliance schedule pursuant to the 2000 SIP §2.2.2, Interim Requirements for Providing Data (note 2005 SIP amendment deleted this section as it is not applicable to permits effective after May 18, 2003). Because SIP §2.1 provides for a maximum 5-year compliance schedule, and permittees granted §2.2.2 schedules have not been previously granted such a schedule under §2.1, those permittees who can demonstrate infeasibility to achieve immediate compliance with limits calculated using the data collected, qualify for a §2.1 schedule up to the maximum statutory date (April 28, 2010).

Cyanide was one pollutant for which the Water Board granted a §2.2.2 compliance schedules to collect better ambient data for cyanide, because the Regional Monitoring Program data were not complete primarily due to inadequate detection limits. BACWA and WSPA funded an effort to collect these data as part of the collaborative receiving water monitoring for other CTR pollutants. The Regional Water Board has received these data, which form the basis for current permits. However, upon further consideration, the SIP §2.2.2 compliance schedule was granted in error, because cyanide is an NTR criterion and not a CTR criterion, and the SIP compliance schedule provisions apply to "…CTR criterion and/or effluent limitations." Thus, it is more appropriate to apply the Basin Plan's compliance schedule provision, which was the implementation tool for NTR criteria prior to the SIP superceding the provisions in the Basin Plan related to calculation of water quality based effluent limitations. As such, the compliance schedule for cyanide should follow note [2a], above.

Appendix F-5(1)
Mercury Mass Limit Calculation for Discharge Point 001

Fact Sheet Appendix 5(1)
C and H Sugar and CSD
Mercury Mass Limit Calculation for Discharge Point 001

Date	Flow (MGD)	Hg (ug/L)	Monthly mass loading (kg/mo)	12-month MA (kg/mo)	ln(MA)
1/9/2002	18.30	0.018	0.0379		
2/15/2002	20.30	0.032	0.0748		
3/14/2002	21.50	0.046	0.1138		
4/11/2002	20.20	0.019	0.0442		
5/9/2002	26.80	0.016	0.0494		
6/6/2002	17.70	0.0069	0.0141		
7/18/2002	15.20	0.03	0.0525		
8/6/2002	34.70	0.021	0.0839		
9/13/2002	29.50	0.0068	0.0231		
10/10/2002	19.00	0.0034	0.0074		
11/7/2002	23.20	0.0031	0.0083		
12/10/2002	21.00	0.0077	0.0186	0.0440	-3.1238
1/7/2003	23.30	0.013	0.0349	0.0437	-3.1296
2/13/2003	26.50	0.0068	0.0207	0.0392	-3.2382
3/13/2003	25.80	0.008	0.0238	0.0317	-3.4506
4/10/2003	30.20	0.0077	0.0268	0.0313	-3.4627
5/8/2003	28.70	0.01	0.1963	0.0430	-3.1454
6/6/2003	24.80	0.008	0.0278	0.0420	-3.1710
7/31/2003	11.80	0.01005	0.0136	0.0394	-3.2338
8/28/2003	20.30	0.0046	0.0107	0.0392	-3.2398
9/11/2003	19.30	0.017	0.0378	0.0381	-3.2670
10/9/2003	20.00	0.0063	0.0145	0.0332	-3.4062
11/6/2003	19.00	0.005	0.0109	0.0323	-3.4327
12/4/2003	20.10	0.0073	0.0169	0.0330	-3.4121
1/15/2004	24.00	0.011	0.0304	0.0346	-3.3653
2/12/2004	16.60	0.02	0.0382	0.0360	-3.3256
3/11/2004	31.60	0.045	0.1637	0.0452	-3.0977
4/22/2004	27.00	0.022	0.0684	0.0505	-2.9865
5/7/2004	20.80	0.082	0.1963	0.0635	-2.7566
6/4/2004	21.20	0.061	0.1488	0.0599	-2.8159
7/16/2004	20.60	0.026	0.0616	0.0625	-2.7733
				Normal distribution	Lognormal distribution
			Average	0.042	-3.192
			Stdev	0.010	0.220
			99.87th %ile	0.072	**0.080**
			Lognormal distribution is used to calculate the mass limit.		

Appendix F-5(2)
Mercury Mass Limit Calculation for Discharge Point 002

Fact Sheet Appendix F-5(2)
C and H Sugar and CSD
Mercury Mass Limit Calculation for Discharge Point 002

Date	Flow CVS (mgd)	002 Discharge Flow (mgd)	Hg Conc. (ug/L)	Mass Loading (kg/mo)	12-month MA Mass Loading (kg/mo)	Ln (MA Mass Loading)
Jan-02	0.36	0.71	0.033	0.0027		
Feb-02	0.31	0.67	0.006	0.0005		
Mar-02	0.32	0.72	0.048	0.0040		
Apr-02	0.28	0.68	0.12	0.0094		
May-02	0.27	0.67	0.0118	0.0009		
Jun-02	0.26	0.65	0.03433	0.0026		
Jul-02	0.36	0.6	0.009933	0.0007		
Aug-02	0.33	0.7	0.039667	0.0032		
Sep-02	0.4	0.67	0.0123	0.0009		
Oct-02	0.28	0.56	0.029333	0.0019		
Nov-02	0.28	0.63	0.013667	0.0010		
Dec-02	0.45	0.77	0.019667	0.0017	0.0025	-6.0095
Jan-03	0.36	0.68	0.024667	0.0019	0.0024	-6.0359
Feb-03	0.31	0.71	0.073433	0.0060	0.0029	-5.8594
Mar-03	0.36	0.78	0.07545	0.0068	0.0031	-5.7809
Apr-03	0.39	0.81	0.010967	0.0010	0.0024	-6.0371
May-03	0.3	0.65	0.2	0.0150	0.0036	-5.6381
Jun-03	0.27	0.6	0.008	0.0006	0.0034	-5.6865
Jul-03	0.25	0.47	0.008	0.0004	0.0034	-5.6927
Aug-03	0.25	0.61	0.008	0.0006	0.0032	-5.7601
Sep-03	0.26	0.6	0.008	0.0006	0.0031	-5.7706
Oct-03	0.26	0.64	0.008	0.0006	0.0030	-5.8060
Nov-03	0.27	0.59	0.009	0.0006	0.0030	-5.8166
Dec-03	0.36	0.74	0.008	0.0007	0.0029	-5.8467
Jan-04	0.36	0.72	0.007475	0.0006	0.0028	-5.8853
Feb-04	0.44	0.76	0.0067	0.0006	0.0023	-6.0624
Mar-04	0.31	0.77	0.0061	0.0005	0.0018	-6.3148
Apr-04	0.28	0.77	0.0105	0.0009	0.0018	-6.3190
May-04	0.26	0.65	0.0029	0.0002	0.0006	-7.4648
Jun-04	0.26	0.66	0.056	0.0043	0.0009	-7.0340
Jul-04	0.25	0.75	0.024	0.0021	0.0010	-6.8899
Aug-04	0.25	0.8	0.0149	0.0014	0.0011	-6.8257
Sep-04	0.24	0.76	0.265	0.0232	0.0030	-5.8188
Oct-04	0.26	0.83	0.496	0.0474	0.0069	-4.9805
Nov-04	0.27	0.77	0.017	0.0015	0.0069	-4.9697
Dec-04	0.39	0.9	0.0077	0.0008	0.0070	-4.9683
Jan-05	0.47	1.04	0.0023	0.0003	0.0069	-4.9724
Feb-05	0.46	1.03	0.00995	0.0012	0.0070	-4.9653
Mar-05	0.43	1.06	0.012333	0.0015	0.0071	-4.9538
Apr-05	0.35	0.87	0.013	0.0013	0.0071	-4.9495
May-05	0.31	0.8	0.013	0.0012	0.0072	-4.9380
Jun-05	0.29	0.82	0.005	0.0005	0.0069	-4.9830
Jul-05	0.27	0.84	0.00795	0.0008	0.0067	-4.9989
Aug-05	0.26	0.88	0.0072	0.0007	0.0067	-5.0069
Sep-05	0.26	0.94	0.014	0.0015	0.0049	-5.3214
Oct-05	0.25	0.84	0.0079	0.0008	0.0010	-6.9068
Nov-05	0.27	0.86	0.031	0.0031	0.0011	-6.7846
Dec-05	0.54	1.09	0.0033	0.0004	0.0011	-6.8133
				AVG	0.0037	-5.8072
				STDEV	0.0023	0.7142
				99.87th %ile	0.0106	**0.0256**
				Distribution	Normal	Lognormal

Note: If mercury effluent concentration is non-detect, the detection limit is used in the calculation.
If there are more than one Hg effluent data in a month, the average Hg concentration for that month is used.

Appendix F-6
Discharger's Infeasibility Analysis

C&H SUGAR COMPANY, INC.
Elizabeth M. Crowley
Environmental Compliance Manager

January 10, 2007

Ms. Tong Yin
California Regional Water Quality Control Board -
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Subject: Infeasibility Analysis – C&H Sugar Company, Inc. and Crockett Services District, Crockett, California, File #2119.1006 – C&H Sugar Company, Inc.

Dear Ms. Yin

Pursuant to the requirements of the State Implementation Policy (SIP), C&H has prepared an Infeasibility Analysis to address with the draft TO's Water Quality Based Effluent Limits (WQBELs) for selenium cyanide and mercury from the C&H Sugar Company, Inc., Crockett Sanitary Department (CSD) and Philip F. Meads Water Treatment Plant ("the JTP"). Based on our analysis, it is infeasible for the JTP to achieve compliance with the proposed WQBELs for selenium, cyanide and mercury prior to issuance of the permit. Therefore, interim limits will be required for these constituents. Details of our analysis are presented below.

Background

The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California, known as the State Implementation Policy (SIP), establishes statewide policy for National Pollutant Discharge Elimination System (NPDES) permitting. The SIP provides for the situation where it is not feasible or reasonable to impose a WQBEL derived from the California Toxics Rule (CTR) or Basin Plan objective on an existing NPDES discharger without sufficient time to evaluate and implement compliance options. The SIP allows for the adoption of interim limits and a schedule to come into compliance with final WQBELs in such cases. To qualify for interim limits and a compliance schedule, the SIP provides dischargers with the ability to demonstrate that it is infeasible to achieve immediate compliance with the WQBELs.

Pursuant to Section 2.1 of the SIP the following information is provided to support a finding of infeasibility for the JTP:

(a) Documentation that diligent efforts have been made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream, and the results of those efforts;

830 Loring Ave
Crockett, CA 94525
Tel 510 787 4352
Fax 510 787 4443
elizabeth.crowley@chsugar.com

(b) Documentation of source control and/or pollution minimization efforts currently underway or completed;
(c) A proposed schedule for additional or future source control measures, pollutant minimization actions, or waste treatment (i.e., JTP upgrades); and
(d) A demonstration that the proposed schedule is as short as practicable.

An additional consideration, while WQBELs have been presented in the draft Tentative Order No. R2-2006-XXX (draft TO), Site Specific Objectives (SSOs) for cyanide and total maximum daily loads (TMDLs) for mercury are likely to lead to different final WQBELs for these chemicals. Nevertheless, the SSO and TMDL may not be completed in timeframe that would obviate the need for compliance with the final WQBELs in the draft TO. Therefore, interim limits are necessary for these constituents.

Infeasibility Analysis

Pollutants to be Evaluated

An Infeasibility Analysis has been performed to ascertain whether is it infeasible to comply with the WQBELS provided in the draft TO by the California Regional Water Quality Control Board - San Francisco Bay Region (Regional Board). The pollutants for which C&H has found it infeasible to achieve WQBELs prior to issuance of the permit are:

- Selenium;
- Mercury; and
- Cyanide.

Effluent Limitation Attainability

Statistical analysis of self-monitoring data collected from January 2002 thru December 2005 was conducted to evaluate whether is it feasible to comply with the WQBELs for selenium, cyanide and mercury. Statistical confirmation of the infeasibility to comply with the WQBELs is attained if the mean, 95th percentile or 99th percentile exceeds the long-term average (LTA), average monthly effluent limitation (AMEL) or maximum daily effluent limitation (MDEL), respectively. Table 1, shown below, summarizes the statistical analysis and shows that it is infeasible to immediately comply with the WQBELs for selenium, cyanide and mercury.

Table 1: Summary of Feasibility Analysis

Constituent (Discharge Location)	Mean vs. LTA (µg/l)	95th vs. AMEL (µg/l)	99th vs. MDEL (µg/l)	Feasible to Comply
Mercury (001)	0.018>0.01	0.05>0.018	0.089>0.046	No
Mercury (002)	0.019>0.0035	0.13>0.012	0.4>0.038	No
Selenium (001)	8.4>2.3	18>3.9	22>8.7	No
Cyanide (001)	0.66<2.0	MEC=4>AMEL=3.2		No
Cyanide (002)	4.8>0.3	15>2.9	19>6.4	No

A. <u>Documentation that diligent efforts have been made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream, and the results of those efforts.</u>

<u>Pollutant Source Identification</u>

An investigation into potential sources of selenium, cyanide and mercury has been conducted for the non-contact cooling water effluent (E-001). An investigation into potential sources of cyanide and mercury has also been conducted for effluent from the JTP (E-002). Effluent from Discharge Point 002 (E-002) consists of treated wastewater from the C&H plant and treated sewage from CSD (treated wastewater).

i. Selenium, cyanide and mercury in non-contact cooling water effluent (E-001)

A *Water Intake Study* (C&H, 2006) was conducted to identify potential sources of selenium, cyanide and mercury in the non-contact cooling water effluent (E-001). The paired t-test statistical method was selected to evaluate the one to one relationship between the corresponding influent and effluent data collected between February 16, 2002 and July 16, 2004. Statistical analysis of influent (I-1) and effluent (E-001) data revealed: no statistically significant difference (at 95 percent confidence) between the influent and effluent data. In some instances the influent data was significantly higher than effluent data. Hence, the investigative efforts have concluded that the source of selenium, cyanide and mercury in effluent from E-001 is the influent water.

ii. Cyanide in treated wastewater (E-002)

- Wastewater Treatment

Cyanide is formed in wastewater treatment plants as a by-product of disinfection processes, such as chlorination.

- Matrix Interferences

Detection of cyanide has been associated with matrix inferences from salts. Cyanide measurements in effluent may be an artifact of the analytical method. This question is being explored in a national research study sponsored by the Water Environmental Research Foundation.

iii. Mercury in treated wastewater (E-002)

Source investigation efforts have revealed that mercury is not used in any process at the C&H plant. However, potential sources have been identified for mercury in effluent:

- Atmospheric sources of mercury

As stated in the *Waste Minimization Plan Annual Report* submitted on June 28, 2002 mercury is present in the ambient air and is a potential source to storm water and the open treatment basins at the JTP. In addition, mercury is a potential contaminant introduced during low-level mercury sample collection (C&H and CVSD, Waste Minimization Plan, Quarterly Report #13: June-August, 2004) and subsequent analysis using EPA Method 1631.

California Air Resources Board conducted an investigation into the concentration of mercury in ambient air at the John Swett High School in the Crockett community. Analytical data collected at the John Swett High School revealed ambient air mercury concentrations at 1.5 nanograms per cubic meter (ng/m^3), which could contribute mercury to the wastewater samples.

- Mercury in East Bay Municipal Utility District Water

The East Bay Municipal Utilities District (EBMUD) regularly conducts analyses of mercury in the water supply. EBMUD data has previously shown that there are pollutants present in the water supply to the C&H plant (C&H Waste Minimization Plan Quarterly Report, August 2001). However, EBMUD data for mercury has a reporting limit of 2 micrograms per liter ($\mu g/l$), which is above the 0.038 $\mu g/l$ MDEL presented in the draft TO.

- Mercury in domestic wastewater

Domestic wastewater has also been identified as a potential source of mercury for the JTP. The average residential source has been estimated to discharge 0.24 $\mu g/l$ of mercury from: human waste; laundry graywater; thermometers; contact lens solution; household products; food wastes; and other identified sources.

B. Documentation of source control and/or pollution minimization efforts currently underway or completed.

The existing pollution prevention activities have been designed to reduce discharge of pollutants, including mercury. However, the efforts have not achieved a level of control or minimization that would meet the Draft TO's WQBELs. An analysis of the existing and ongoing potential pollution prevention measures is presented below. Cyanide had not previously been anticipated to be a pollutant of concern in effluent from E-002; therefore source control actions targeting cyanide have not been implemented.

Intake Water Study

The Intake Water Study concluded that the source of selenium, cyanide and mercury in effluent from E-001 is the influent water. Therefore, source control and/or pollution minimization efforts were not necessary for E-001.

Wet Weather Preparedness Program

A yearly checklist for inspection of pump station facilities and removal of grit from the collection system, including contributions of mercury, is prepared prior to each wet-weather season (CVSD Waste Minimization Plan Annual Report, 2003).

Tank and Force Main Cleaning

Mud, sand and other solids with potential for contribution of mercury was removed from the CSD equalization tank and 3,130 lineal feet of force main during 2003 (CVSD Waste Minimization Plan Annual Report, 2003). Additional surge tank solids were removed from the JTP in 2004 by C&H contractors.

Community Outreach Program

CSD has been implementing a community outreach program to inform the local community regarding the development and implementation of its pretreatment program. The outreach program is designed to educate the community regarding actions that they can take to help reduce pollutant loads and the cost for addressing the pollutants. The outreach program includes:

- a thermometer exchange program offering digital fever thermometers in trade for any devices containing mercury (CVSD Waste Minimization Plan, December – February 2004); and

- a web site to emphasize the importance of source control in the home and business, including the thermometer exchange program (CVSD Waste Minimization Plan, March - May 2004).

Outreach and Training

The C&H plant provides outreach and training to employees and contractors handling, using and disposing of materials that may contain mercury (C&H Waste Minimization Plan Annual Submittals, 2002).

Additional efforts were made by the C&H Environmental Department to contact and alert the John Swett High School Science Department Chairperson and the local dental office. In once instance the Dental office had just had their mercury trap serviced, but it had not been properly reinstalled. The correction was made after C&H issued the alert.

Mercury Source Investigation

A mercury source investigation was conducted by the C&H plant and revealed that mercury is present in equipment switches, laboratory thermometers, and fluorescent light bulbs. The equipment, thermometers and fluorescent light bulbs containing mercury are completely enclosed and do not expose the mercury under usual circumstances. Mercury-containing items that are removed are handled and manifested as hazardous waste for proper disposal (C&H Waste Minimization Plan Quarterly Report, August 2001).

Atmospheric Mercury

Field blanks were collected for mercury analysis during self-monitoring from January 2002 through December 2005. The maximum concentration of mercury in the field blank samples was reported at 0.021 micrograms per liter (µg/l).

C. A proposed schedule for additional or future source control measures, pollutant minimization actions, or waste treatment (e.g., JTP upgrades).

Investigative studies have concluded that the source of selenium, cyanide and mercury in effluent from E-001 is the intake water. Therefore, additional source control measures are not feasible.

Additional source control measures to address cyanide and mercury in effluent from E-002 will be evaluated during the next three years, i.e., prior to 2010. A discussion of the proposed activities is presented below.

i. Data Validation (Second Quarter 2007 to Third Quarter 2007)

Before additional efforts are taken to implement studies or control measures for cyanide and mercury, studies regarding the anticipated effluent concentrations will be conducted.

- Mercury in Field Blanks

Mercury field blanks will be used to identify false positives from ambient air contamination to assess data reliability, pursuant to USEPA Method 1631 Revision D. Consistent with Section 12.5.2 of USEPA Method 1631 Revision D the concentration of mercury in the method blanks or field blanks associated with the sample may be subtracted from the results for that sample, or must be subtracted if requested or required by a regulatory authority or in a permit.

- Cyanide Matrix Interference

As cyanide is reported to be an artifact of matrix inferences associated with the analytical protocol, matrix interferences studies will be conducted to quantify the contribution of cyanide from interference.

ii. Source Characterization (Fourth Quarter 2007 to First Quarter 2008)

Additional source characterization will be conducted if the results of the data validation reveal that the cyanide or mercury is above the final WQBELs. A survey will be conducted of potential dischargers of high concentrations of detergents, e.g., nursing homes, hospitals, car washes, pet grooming facilities. Sampling will be conducted to characterize contributions from selected businesses.

iii. Source Control (Second Quarter 2008 to Fourth Quarter 2008)

If the comprehensive source identification confirms that source control measures are required, appropriate source control measures will be identified. Alternative treatment methods for cyanide and mercury will be evaluated if source control does not reduce E-002 concentrations to meet the final WQBELs.

iv. Treatment Evaluation (First Quarter 2009 to Second Quarter 2009)

The JTP will evaluate end-of-pipe treatment options is source characterization does not meet final WQBELs for cyanide and mercury. Preliminary results of the source identification study will be used to screen potential treatment technologies and select candidate processes for further engineering development.

v. Construct Treatment System (Second Quarter 2009 to Second Quarter 2010)

Based on the treatment evaluation, appropriate treatment technology(s) will be pilot-tested. Following pilot-testing, design of a full-scale treatment system will be conducted. Subsequently, equipment would be procured and installed.

D. A demonstration that the proposed schedule is as short as practicable.

The Intake Water Study demonstrated that the source of selenium, cyanide and mercury in effluent from E-001 is the intake water. Final effluent limits for mercury will be derived from the waste load allocation established under the TMDL. The final WQBEL for mercury is projected to be changed based on the results of the TMDL and waste load allocation. Similarly, the SSO for cyanide has been approved by the Regional Board. Adoption of the SSO for cyanide is anticipated to result in higher final WQBELs. As treatment for the intake water is infeasible, the three year schedule, i.e., March 2007 to April 2010, is the shortest practicable to allow either the Regional Board to adopt the SSO for cyanide and the TMDL for mercury or develop appropriate final WQBELs based on intake water quality.

The discharge monitoring data show that the calculated 95th percentile values for mercury and the maximum estimated concentration (MEC) for cyanide from E-002 exceed the AMELs developed for these constituents. Therefore, additional work must be undertaken to comply with the final WQBELs presented in the draft TO.

It is likely that mercury in E-002 originates from ambient air and domestic wastewater. Data validation and source investigation are to be conducted to confirm and quantify matrix inference contributions of cyanide. Given the limited information on the source(s) of these pollutants it is unknown what additional actions and measures may be necessary to meet the final WQBELs. Furthermore, if the JTP cannot achieve compliance though pollution prevention alone, then the treatment involving yet-to-be defined innovative technology will be needed. Given the complexity and unknown variables, the three year schedule to conduct investigations, identify, pilot test, design, construct and commission facilities to comply with the final WQBELs is the shortest practicable and is consistent with the California Toxics Rule (CTR), SIP and Water Quality Control Plan – San Francisco Bay Region (Basin Plan). As noted above the three-year schedule should allow the Regional Board to adopt the SSO for cyanide and the TMDL for mercury, which are anticipated to result in higher WQBELs for E-002.

Summary

This evaluation indicates that immediate compliance with projected final WQBELs for selenium, cyanide and mercury is not feasible. Based on the infeasibility of immediate compliance, the draft TO should include interim performance-based limits. Compliance schedules are needed to allow time for completion of activities that include TMDL/waste load allocation (WLA) development, approval of site-specific water quality objectives (WQOs) (where applicable), adjustments of WQBELs to confirm the WLAs and revised site-specific WQOs (as necessary), source characterization and evaluation of source control measures, engineering, installation and commissioning of end-of-pipe wastewater treatment facilities. The JTP will implement the actions listed above for the constituents receiving interim limits.

Please contact me or Peter M. Krasnoff, P.E., of WEST, if you have any questions or wish to discuss the findings.

Sincerely,

Elizabeth M. Crowley

cc: CSD

Encl.

Appendix F-7
Discharger's Intake Water Credit Request

C&H SUGAR COMPANY, INC.
Elizabeth M. Crowley
Safety & Environmental Compliance Manager

August 7, 2006

VIA emailed pdf & Certified U.S. Mail #7005 1160 0004 5058 5135

Ms. Tong Yin
California Regional Water Quality Control Board -
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Re: Intake Water Credit
C&H Sugar and Crockett Services District
Crockett, California
File #2119.1006 – C&H Sugar Company, Inc.

Dear Ms. Yin:

Pursuant to your request of August 2, 2006 and our ongoing discussions regarding the renewal of the National Pollution Discharge Elimination System (NPDES) permit for C&H and the joint CSD/C&H Sugar discharge, C&H Sugar is submitting the attached supplemental monitoring data, and formally requesting an intake water credit for the C&H Sugar discharge location E-001 based on the information contained in this letter and the attached data. It is our understanding that the California Regional Water Quality Control Board – San Francisco Bay Region ("Regional Board") will evaluate this request and data prior to the issuance of an updated draft NDPES permit.

As part of the permit renewal process, the Regional Board undertook a Reasonable Potential Analysis (RPA) that identified certain chemicals with the potential to be present in the non-contact cooling water effluent (E-001) above water quality based effluent limits (WQBELs). These chemicals included: arsenic, copper, lead, mercury, nickel, selenium and 2,3,7,8-TEQ. The RPA appropriately narrowed the list to mercury, selenium and cyanide as the chemicals with potential to be present in the discharge above WQBELs.

As you know, C&H's existing NPDES permit regulates the discharge at E-001 based on the net increase of Biochemical Oxygen Demand (BOD) above influent. C&H supports a continuation of this approach, as it is consistent with the analysis of the monitoring data from 2002 to 2004 that reflects no statistical difference between the intake and the effluent

830 Loring Ave
Crockett, CA 94525
Tel 510 787 4352
Fax 510 787 4443
elizabeth.crowley@chsugar.com

non-contact cooling water discharged at E-001. Details of the analysis and justification for the intake water credit are provided below.

Intake Water Allowance

The Regional Board has developed preliminary effluent limits for mercury, selenium and cyanide for the discharge E-001, i.e., the non-contact cooling water discharge. As presented in our July 10, 2006 comments on the Regional Board's Reasonable Potential Analysis (RPA), this is a discharge of non-contact cooling water and C&H's process are not a suspected source of the identified chemicals. C&H should not have to address pollutants present in the intake from the receiving water body. As provided in the State Implementation Policy, Section 1.4.4, the Regional Board may consider intake water quality when establishing WQBELs, where:

"(1) The observed maximum ambient background concentration, as determined in section 1.4.3.1, and the intake water concentration of the pollutant exceeds the most stringent applicable criterion/objective for that pollutant;

(2) The intake water credits provided are consistent with any TMDL applicable to the discharge that has been approved by the RWQCB, SWRCB, and U.S. EPA [TMDL; not applicable];

(3) The intake water is from the same water body as the receiving water body. The discharger may demonstrate this condition by showing that:

(a) the ambient background concentration of the pollutant in the receiving water, excluding any amount of the pollutant in the facility's discharge, is similar to that of the intake water;
(b) there is a direct hydrological connection between the intake and discharge points;
(c) the water quality characteristics are similar in the intake and receiving waters; and
(d) the intake water pollutant would have reached the vicinity of the discharge point in the receiving water within a reasonable period of time and with the same effect had it not been diverted by the discharger.

The RWQCB may also consider other factors when determining whether the intake water is from the same water body as the receiving water body;

(4) The facility does not alter the intake water pollutant chemically or physically in a manner that adversely affects water quality and beneficial uses; and

(5) The timing and location of the discharge does not cause adverse effects on water quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water body."
As you know, TMDLs are not applicable in this instance.

As the analysis presented below demonstrates, these conditions have been met[1]. Therefore, we request the Regional Board establish effluent limitations for the non-contact cooling water discharge from E-001 to allow discharge of the mass and concentrations equivalent to the influent water. Due to the inherent variability in laboratory analysis, and consistent with the SIP, we also request that the allowance be based on the arithmetic mean of the influent and effluent water quality.

The monitoring data indicated that mercury, selenium and cyanide were detected up to 0.05 micrograms per liter (µg/l), 20 µg/l, 2.1 µg/l, respectively in the influent non-contact cooling water. The WQBEL for mercury, selenium and cyanide have been identified by the Regional Board as 0.025 µg/l, 5 µg/l and 1 µg/l, respectively. Based on this monitoring data, the intake water quality exceeds WQBELs. In fact, given the levels of these chemicals in the intake water, it would be difficult to meet final WQBELs for mercury, selenium and cyanide with BAT/BCT technology applied to just the intake water. More importantly, it is not possible for C&H to address source reduction associated with these constituents because these chemicals are not used in any of the C&H's processes, and elevated concentrations appear to be the result of concentrations in the intake water.

On the second applicable criteria, the discharge point is hydrologically connected to the intake source. All of the non-contact cooling intake water is from the Carquinez Strait and the intake structure is located approximately 500 feet upstream of discharge point E-001. As 100 percent of the water discharged at E-001 is from the same receiving water body, the intake water pollutants would have reached the vicinity of the discharge point in the receiving water within a reasonable time and with the same effect had it not been diverted by its use for cooling.

This latter conclusion is supported by a statistical analysis of the monitoring data that demonstrates that there is no change in water quality from its use as non-contact cooling water. Intake and discharge samples were collected contemporaneously 32 times between February 2002 and July 2004. Statistical analysis was performed with paired t-tests using the I-1 and E-001 monitoring data to assess whether influent non-contact cooling water quality (I-1) was statistically different from non-contact cooling water discharge from E-001. The paired t-test statistical method was selected to evaluate the one to one relationship between the corresponding influent and effluent values.

Statistical analysis of the monitoring data using the paired t-test did not reveal a significant difference at the 95 percent confidence between I-1 and E-001 data for selenium as well as copper, chromium, and zinc. The statistical analysis, however, revealed that influent water quality (I-1) was significantly higher at the 95 percent confidence level than the discharge from E-001 for mercury, as well as cadmium, lead, and silver. The only chemical that analysis suggested might appear to be present at a statistically higher concentration in the

[1]The U.S. EPA NPDES permit program also allows credit for pollutants in intake water in cases where the facility is faced with situations in which limits are difficult or impossible to meet with Best Available Technology Economically Achievable (BAT) or Best Conventional Pollutant Control Technology (BCT). 40 Code of Federal Regulations §122.45(g)

effluent than in the influent was cyanide. However, there are no sources of cyanide in the system of non-contact cooling water that discharges at E-001. Thus, the analytical data appears to be reflecting something other than a contribution from C&H. The statistically significant difference for cyanide appears attributable to inherent variability in laboratory analytical recoveries and bias from varying laboratory-reporting limits, i.e., the laboratory-reporting limit for cyanide at I-1 was 0.003 µg/l compared to 0.9 µg/l at E-001. As the statistical analysis shows, without an intake credit for the non-contact cooling water intake, the discharge would be inappropriately regulated for pollutants.

We appreciate your consideration of our request and for the opportunity to provide input at this time. Please contact me if you have questions or wish to discuss our comments.

Sincerely,

Elizabeth M. Crowley

Encl.

C&H SUGAR COMPANY, INC.
Elizabeth M. Crowley
Environmental Compliance Manager

January 5, 2006

Ms. Tong Yin
California Regional Water Quality Control Board -
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Subject: Intake Water Credit, C&H Sugar Company, Inc. and Crockett Services District
Crockett, California, File #2119.1006 – C&H Sugar Company, Inc.

Pursuant to your request of January 3, 2007 and our ongoing discussions regarding the renewal of the National Pollution Discharge Elimination System (NPDES) permit for C&H and the joint CSD/C&H Sugar discharge, C&H Sugar is submitting the attached supplemental monitoring data, and formally requesting an intake water credit for: arsenic; 2,3,7,8-TCDD-TEQ (TCDD-TEQ); and bis(2-ehtylhexyl)phthalate at the C&H Sugar discharge location E-001. In addition, we are providing an updated statistical analysis for cyanide at M-INF-001 (I-1) using revised method detection limits.

Background

As part of the permit renewal process, the California Regional Water Quality Control Board - San Francisco Bay Region (Regional Board) undertook a Reasonable Potential Analysis (RPA) that identified certain chemicals with the potential to be present in the non-contact cooling water effluent (E-001) above water quality based effluent limits (WQBELs). These chemicals included: arsenic, copper; lead; mercury; nickel; selenium; zinc; cyanide; TCDD-TEQ; and bis(2-ehtylhexyl)phthalate.

Based on statistical analysis of influent (I-1) and effluent (E-001) data collected at C&H between February 16 2002 and July 16, 2004, C&H formally requested an intake water credit on August 6, 2006. Water intake credits were requested for: copper, lead, mercury, selenium, zinc and cyanide. The Regional Board approved water intake credits for: copper; lead; mercury, selenium and zinc. In addition, the Regional Board requested supplemental statistical evaluations for arsenic; TCDD-TEQ; and bis(2-ehtylhexyl)phthalate.

Data Analysis

Effluent monitoring data from E-001 indicated that arsenic, TCDD-TEQ; and bis(2-ehtylhexyl)phthalate were detected up to 45 micrograms per liter (µg/l), 0.056 picograms per liter (pg/l) and 4 µg/l respectively in the non-contact cooling water. TCDD was not reported above a maximum method detection limit of 0.847 pg/l.

830 Loring Ave
Crockett, CA 94525
Tel 510 787 4352
Fax 510 787 4443
elizabeth.crowley@chsugar.com

Influent monitoring data from I-1 indicated that arsenic, TCDD-TEQ; and bis(2-ehtylhexyl)phthalate were detected up to 55 micrograms per liter (µg/l), 0.039 picograms per liter (pg/l) and 0.8 µg/l, respectively. TCDD was not reported above a maximum method detection limit of 0.847 pg/l. Based on this monitoring data, the intake water quality exceeds WQBELs for arsenic and TCDD-TEQ. In fact, given the levels of these chemicals in the intake water, it would be difficult to meet final WQBELs for arsenic at 36 µg/l, and TCDD-TEQ at $1.4X10^{-8}$ µg/l with BAT/BCT technology applied to just the intake water. More importantly, it is not possible for C&H to address source reduction associated with these constituents because these chemicals are not used in any of the C&H's processes, and elevated concentrations appear to be solely an artifact of intake water.

Analysis of the monitoring data demonstrates that there is no statistically significant difference between the I-1 and E-001 analytical data. Intake and discharge samples were collected contemporaneously between February 2002 and July 2004 for arsenic; TCDD-TEQ; and bis(2-ehtylhexyl)phthalate. Statistical analysis was performed with paired t-tests using the I-1 and E-001 monitoring data to assess whether influent non-contact cooling water quality (I-1) was statistically different from non-contact cooling water discharge from E-001. The paired t-test statistical method was selected to evaluate the one to one relationship between the corresponding influent and effluent values.

Statistical analysis of the monitoring data using the paired t-test did not reveal a significant difference at 95 percent confidence between I-1 and E-001 data for arsenic ($p=0.305$); TCDD-TEQ ($p=0.219$); and bis(2-ehtylhexyl)phthalate ($p=0.147$).

<u>Cyanide Method Detection Limit at I-1</u>

A review of I-I cyanide analytical data and consultation with Caltest Laboratory revealed that the method detection limit for the inflow was of 0.9 µg/l and that the method-reporting limit for the inflow was 3 µg/l. A revised statistical analysis of the E-001 and I-1 analytical data was conducted using the updated information. Statistical analysis for cyanide revealed no significant difference at the 95 percent confidence between I-1 and E-001 data ($p=0.360$).

We appreciate the opportunity to provide input at this time. Please contact me if you have questions or wish to discuss our comments.

Sincerely,

Elizabeth M. Crowley

Attachment

Draft Privileged and Confidential Attorney Client Work Product

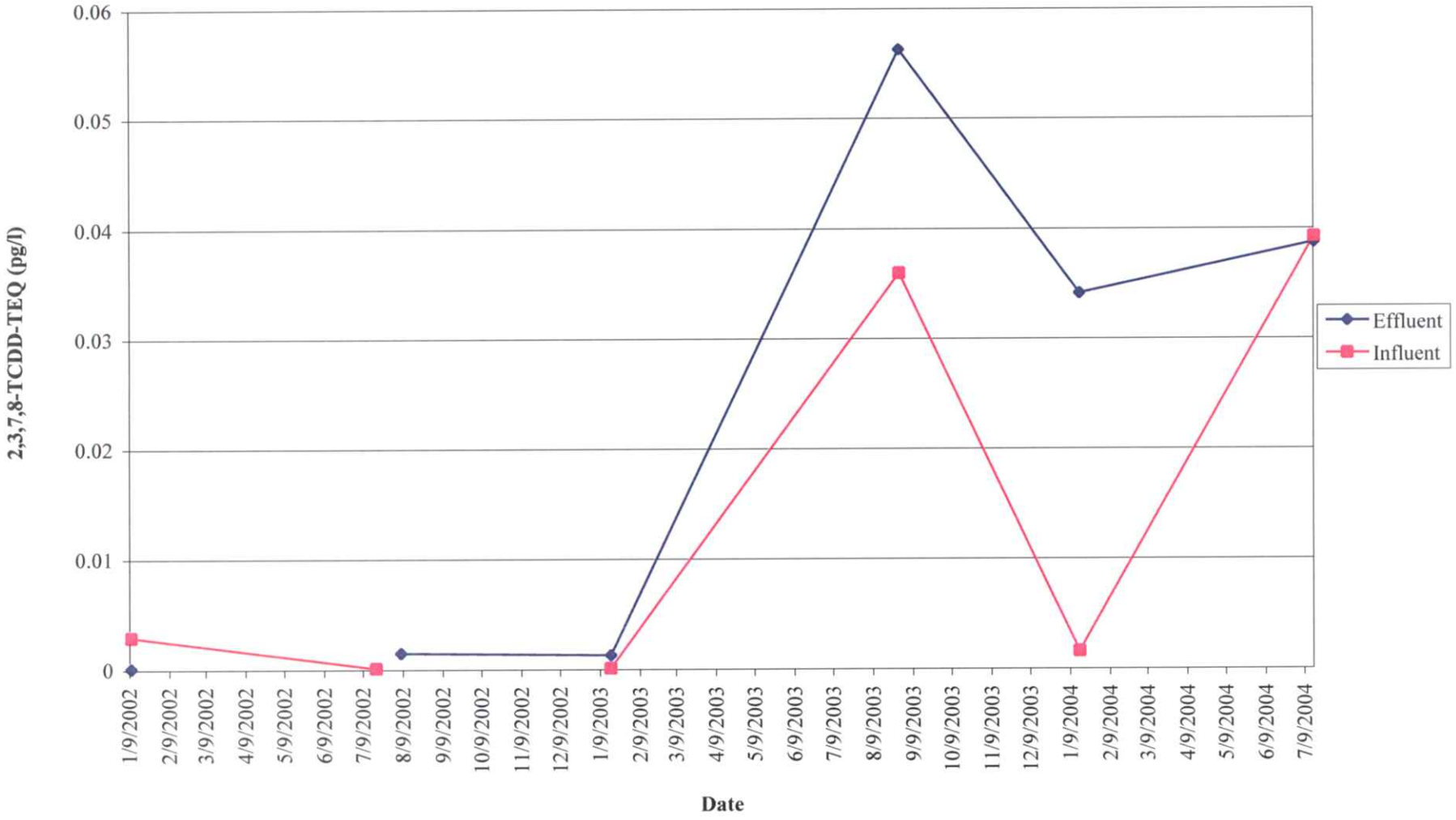
Influent and Effluent Concentration with Time

No significant difference between influent and effluent
p = 0.305 at 95 percent confidence using paired t-test

Draft Privileged and Confidential Attorney Client Work Product

Influent and Effluent Concentration with Time

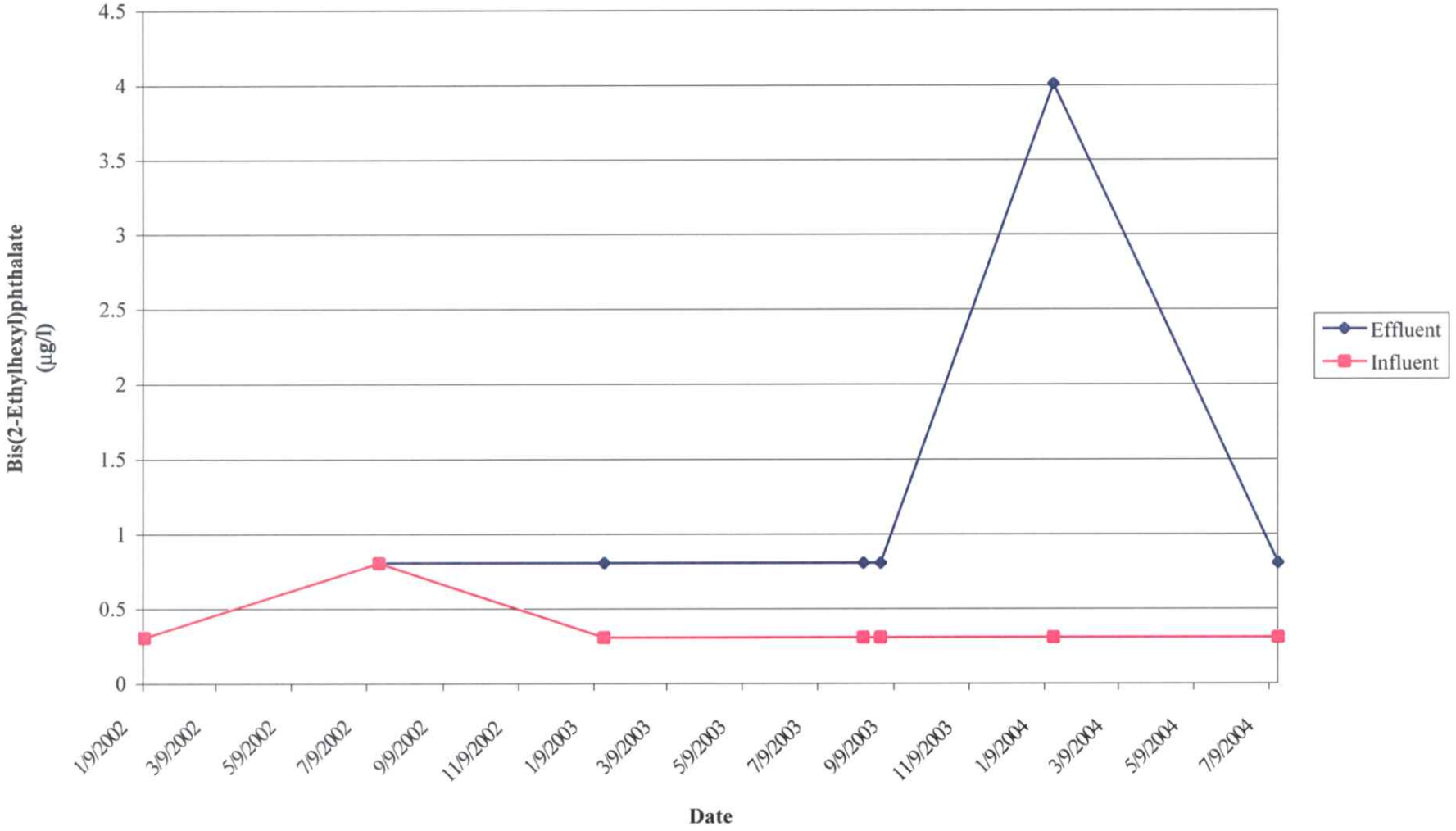
No significant difference between influent and effluent
p = 0.219 at 95 percent confidence using paired t-test



Draft Privileged and Confidential Attorney Client Work Product

Influent and Effluent Concentration with Time

No significant difference between influent and effluent
p = 0.147 at 95 percent confidence using paired t-test



Draft Privileged and Confidential Attorney Client Work Product

Influent and Effluent Concentration with Time

No significant difference between influent and effluent
p = 0.360 at 95 percent confidence using paired t-test